



## **Jackson County Board of Commissioners**

67 Athens Street  
Jefferson, Georgia 30549  
Phone: (706) 367-6309  
Fax: (706) 367-2505  
Email: myarbrough@jacksoncountygov.com

### **INVITATION TO BID**

February 17, 2022

Bid Number: 220005

Bid Name: Provide Generator with trailer, EMA

The Jackson County Board of Commissioners is soliciting bids for the purchase, including deliver of a trailer mounted generator.

Specifications, terms and conditions are contained herein.

**BID DUE DATE/TIME:** March 29, 2022 at 10:00 am, local time pertaining

**RETURN BID VIA:** sealed bid via mail or deliver to:

Jackson County Board of Commissioners  
Attn: Purchasing Manager – Bid #220005, Generator  
67 Athens Street  
Jefferson, GA 30549

**PUBLIC BID OPENING DATE/TIME:** March 29, 2022 at 10:00 am, local time pertaining

**LOCATION:** 67 Athens Street, Jefferson, GA 30549

Direct all questions concerning this bid to:

Myrna Yarbrough

Jackson County Purchasing Manager

(706) 367-6309

**myarbrough@jacksoncountygov.com**

## **1. GENERAL INFORMATION FOR BIDDERS:**

A. From the issue date of this Invitation to Bid (ITB) until an award has been announced, vendors shall not communicate with any Jackson County elected official or employee, with the exception of the name stated above or the Purchasing Manager, concerning this ITB or any information herein.

B. Whenever the terms “shall”, “must”, “will”, or “is required” are used in the ITB, the item being referred to will be considered a mandatory requirement of this ITB and failure to meet any mandatory requirement may be cause for rejection of the bid.

C. All amendments and or addendums will be posted on the Jackson County Purchasing Information website, [www.jacksoncountygov.com](http://www.jacksoncountygov.com) and at [www.vendorregistry.com](http://www.vendorregistry.com) . It is the bidder’s responsibility to check this site on a regular basis. The Board will not be responsible for any information not viewed by bidders.

## **2. QUOTATIONS**

A. The Board of Commissioners reserves the right to:

- (1) waive formalities and technicalities in any quotation;
- (2) reject any and/or all quotations when in the Board’s judgment, it will be in the best interest of the County;
- (3) accept the quotation that in its judgment will be in its best interest of the County;
- (4) purchase from any source, in part or in whole any supplies, equipment or services;
- (5) at its option, award on individual items or on a lump sum basis;
- (6) award this bid to the vendor who in the Board's opinion is most responsive and responsible and will perform in the best interest of the County;
- (7) negotiate final product and final price.

B. Price alone will not be the determining factor in award of this bid.

C. The bidder may give quotations on any one or more items and may offer alternate items where indicated. No substitutes will be accepted once order is placed.

**3. PRICE:** Prices quoted shall include all costs and charges to include, but not limited to purchasing, packing, transporting the equipment and/or services described herein. The Jackson County Government is exempt from state sales tax. All fees shall be included in the bid price. Bidders must quote based on the bid unit listed.

**4. SAMPLES:** If samples are requested by the Board of Commissioners, they shall be at no charge to the BOC and will become property of the BOC, unless return is requested by the bidder in writing in their bid. Return of samples will be at bidder’s expense.

**5. AWARD:** This bid will be awarded to one vendor.

**6. TRADE NAME:** Bidders are required to indicate the brands and models of merchandise and/or services quoted. Unless listed as "brand/model only", brand names and models listed in specifications are used as a standard of quality and/or clarification of desired product.

**7. MARKING:** Merchandise in full cases shall have an identification marking on the outside of the case. Each case, shipping container, etc. shall be marked with the Purchase Order Number supplied by the Board.

**8. SAFETY:** Material Safety Data Sheets shall be provided for all applicable items.

**9. DELIVERY:** Delivery of all materials from this quotation must be FOB destination to EMA, Jefferson, GA. Delivery shall be made within the vendor's quoted days after receipt of order. Any item(s) not delivered within the time limit may be cancelled by BOC at no expense to same. No deliveries are accepted on Saturdays, Sundays or holidays. DELIVERY SHALL BE ACCOMPLISHED ON WEEKDAYS BETWEEN 8:00AM AND 4:00PM EASTERN TIME.

**10. INSPECTION:** All merchandise and services shall be subject to inspection after arrival at destination or completion of work. In case any items are found to be defective or otherwise not in conformity with specifications or statement of work, the Board has the right to reject such items and/or services and return them at bidder's expense.

**11. PAYMENT:** The Jackson County Board of Commissioners shall make payment for goods and services within thirty (30) days upon receipt, inspection and acceptance by BOC personnel and receipt of invoice. Payment may be made by check or by ACH.

**12. FACILITIES AND EQUIPMENT:** The bidder shall be responsible for the protection of the Jackson County Government's premises and property, and will be held liable for any damages caused by the bidder, bidder's employee(s) or bidder's agent(s) during the execution of this bid, resultant purchase orders or contracts.

**13. INTERPRETATION:** If a bidder contemplating submitting a price quotation is in doubt as to the true meaning of any part of these documents, submit a request for interpretation in writing to the Purchasing Manager at the contact information listed above. All such interpretations will be posted on the Jackson County Purchasing Information web page.

**14. INDEMNIFICATION:**

A. The bidder does hereby indemnify and shall hold harmless the Jackson County Government, its Board members, employees, agents, and servants (each of the foregoing being hereafter referred to individually as "Indemnified Party") against all claims, demands, causes of actions, actions, judgments or other liability including attorney's fees (other than liability solely the fault of the Indemnified Party) arising out of, resulting from or in connection with the Bidder's performance or failure to perform this agreement, including but not limited to:

(1). All injuries or death to persons or damage to property, including theft.

(2). Bidder's failure to perform all obligations owed to the bidder's employees including any claim the bidder's employees might have or make for privilege, compensation or benefits under any BOC benefit plan.

(3). any and all sums that are due and owing to the Internal Revenue Service for withholding FICA, and unemployment or other State and Federal taxes.

B. The bidder's obligation to indemnify any Indemnified Party will survive the expiration or termination of this agreement by either party for any reason.

**15. FAILURE TO BID: N/A**

**16. TERM OF CONTRACT:** By submitting a bid in response to this ITB, the bidder is agreeing to guarantee bid prices for the period beginning with bid award and ending upon the complete acceptance, installation, and test of the generator. The term may be extended for a period of six months upon agreement of both parties.

**17. BID RECAP:**

A. A bid summary shall be sent to all responding bidders, if requested.

B. A bid summary is available to all other requesters at no charge if requested within thirty days of bid award.

C. After thirty days of bid award, bid documents are available under the Georgia Open Records Act. A written request must be made to the Jackson County Board of Commissioners.

**18. GENERATOR SPECIFICATIONS:** The following outlines the specifications that are desired by the Jackson County Board of Commissioners for the generator and associated trailer. When providing a bid for this ITB, please provide the manufacture's brochure or specifications data and highlight any specifications that differ from the below requirements by indicating if the specifications of the generator being offered is "equivalent to", "less than:", or "exceeds" the specifications listed herein. Failure to accurately identify specification differences may lead to the vendor being disqualified.

Freight/delivery costs should be included in the final bid price.

**OTHER:** The undersigned offers and agrees to furnish any or all of the items upon which prices are quoted at the price set opposite each item, in the quantities described, delivered to the point(s) specified, in accordance with the terms and conditions set forth herein. The laws of the State of Georgia shall prevail concerning all purchases and services under this contract.

I certify that I have read and understand the terms and conditions herein except as stated below. I further state that I am and/or my company is capable, able to, and will provide the requested products and/or service described herein. I am the owner or agent of the company stated below and am authorized and empowered to contract. By my signature on this ITB, I/we guarantee and certify that all items included in my bid meet or exceed specifications.

I certify that this quotation is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a quotation for the same materials, supplies, equipment, or services and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of State and Federal Law and can result in fines, prison sentences, and civil damage awards. I agree to abide by all conditions of the quotation and certify that I am authorized to sign this quotation for the Contractor.

SUBMITTED BY \_\_\_\_\_ DATE \_\_\_\_\_

TITLE \_\_\_\_\_ EMAIL: \_\_\_\_\_

COMPANY NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_

TELEPHONE NUMBER \_\_\_\_\_ FAX NUMBER \_\_\_\_\_

COMPANY WEBSITE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

**RETURN THIS FORM WITH YOUR BID PACKAGE**

### **ITB #220005 Bid Pricing Outline**

Year: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_

This bid is for a new 100 KW Generator that is mounted on a DOT approved trailer. Generator may be Caterpillar or Cummins or equal. See attached specifications pages for reference.

Total Cost of Generator and Trailer; \$ \_\_\_\_\_

Deliver time: \_\_\_\_\_

**RETURN THIS FORM WITH YOUR BID PACKAGE**

## **Addenda Acknowledgement**

I have reviewed the following addenda that were released in association with this bid (please check):

Addendum 1: \_\_\_\_\_

Addendum 2: \_\_\_\_\_

Addendum 3: \_\_\_\_\_

Addendum 4: \_\_\_\_\_

Addendum 5: \_\_\_\_\_

Addendum 6: \_\_\_\_\_

**RETURN THIS FORM WITH YOUR BID PACKAGE**



# Rental Power

100 kW

U.S EPA Tier IV emissions



## Description

This Cummins® Rental package is a fully integrated mobile power generation system, providing optimum performance, reliability, and versatility for Standby and Prime Power applications.

## Features

### Cummins diesel engines

- U.S. Tier IV Final and EU SIIIa certified Cummins QSB5-G11 engines which meet emissions limits without the use of a Diesel Particulate Filter (DPF)
- Dual speed engine for operation at 50 or 60 Hz
- Advanced electronic engine controls with integrated after-treatment system provide superior fuel efficiency while reducing emissions
- High-pressure common rail fuel system reduces engine noise and smoke
- Cummins Direct Flow™ air filtration offering improved air management, longer service life, and easier serviceability
- 2-stage fuel filtration with optimum particle and water separation

### Control features

- The most advanced, reliable and capable generator set control system on the market today
- PowerCommand 3.3® with Masterless Load Demand (MLD) technology enables smartly adapting power to match varying load demand. MLD capable generators allow sharing of information among paralleled generator sets
- Controls provide precise frequency and voltage regulation, alarm and status message display in one easy to operate customer interface

## Engine controls

- Oil pressure and coolant temperature gauge
- Fuel level gauge, Diesel Exhaust Fluid (DEF) level gauge and battery voltage gauge
- Digital Hour meter (5-digit read out)
- Engine control module includes remote start capability

## Stamford alternators

- 12-lead reconnectable alternators fitted with voltage selection switch
- Permanent magnet excitation for improved performance in non-linear load applications

## Rental package enclosure

- Camlock, barrel lugs & bus bar distribution panel
- Sound attenuated, white powder coated lockable enclosure
- 24-hour fuel tank (75% prime) with leak detection sensor
- Single wall fuel tank with 110% fluid containment basin
- Transport Canada Tank
- Roof mounted, single point lift
- Cooling system rated for 120 °F (49 °C) at 100% Standby ambient
- Complete engine fluid containment reservoir
- 4 position voltage selector switch (277/480 or 139/240 or 120/208 VAC 3 phase or 120/240 VAC 1 phase)
- 2 position voltage selector switch (60Hz: 277/480 or 347/600 VAC 3 phase).
- Shore power (15A/120 V) – for coolant heater, battery charger, oil heater and battery warmer
- Conveniently located analog gauges and heated Human Machine Interface (HMI) display

## Rental package options

- Optional Auxiliary Fuel and DEF connections
- DOT approved electric brake trailer with heavy duty center mounted jack, ball or pintle hitch
- DOT approved hydraulic brake trailer with heavy duty center mounted jack, ball or pintle hitch

Model	Voltages (V)	Standby Rating		Prime Rating		Sound Level Full load @7m	Alternator Model
		60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)		
C100D2RE	480-600 Switchable	100 (125)	-	90 (113)	-	68 dB(A)	UCI274E
	208/240/480	100 (125)	90 (113)	90 (113)	81 (101)	68 dB(A)	UCI274D



## Engine specifications

Engine model	QSB5-G11
Alternator data sheet	UCI
Tier rating	Tier IV
Design	4 cycle, In-Line, turbocharged and after-cooled
Bore	107 mm (4.21 in.)
Stroke	124.0 mm (4.88 in.)
Displacement	4.5 liters (274.6 in <sup>3</sup> )
Cylinder block	Cast iron, In-Line 4 cylinder
Battery capacity	2 x 760 cca
Battery charging alternator	70 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct injection HPCR system
Fuel filter	Dual Spin on fuel filter with water separator
Air cleaner type	2-stage, dry replaceable element with dust ejector
Lube oil filter type(s)	Single spin-on, full flow
Standard cooling system	120 °F (49 °C) ambient radiator

## Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	Double layer concentric, 2/3 winding pitch
Rotor	Single bearing, flexible disc
Insulation system	Class H per NEMA MG1-1.65
Standard temperature rise	125/40 °C Prime
Exciter type	Permanent Magnet Generator (PMG)
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform Total Harmonic Distortion (THDV)	< 1.5% no load, < 5% non-distorting balance linear load
Telephone Influence Factor (TIF)	< 50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	< 2%

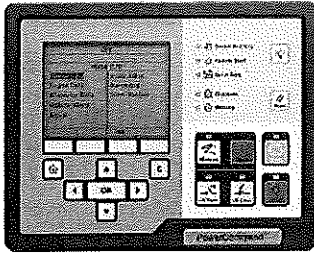
## Power capability specifications (Assume power factor = 0.80 for 3 phase amps)

	Standby rating					
	240 V, 1 phase Amps 60 Hz	208 V, 3 phase Amps 60 Hz	480 V, 3 phase Amps 60 Hz	240 V, 3 phase Amps 60 Hz	400 V, 3 phase Amps 50 Hz	600 V, 3 Phase Amps 60Hz
<b>C100D2RE</b>	280	347	150	301	162	120

## Electrical power panel specifications

Model voltage	120 V duplex receptacles	240 V twist	Load lug connection (stud diameter)	Load lug circuit breakers
120/480 Volt	2 - 20 Amp GFCI	3 - 50 Amp	1/2 inch	400 Amp
480-600 Volt			1/2 inch	150 Amp

## PowerCommand 3.3 control system



An integrated microprocessor based generator set control system providing voltage regulation, engine protection, alternator protection, operator interface and isochronous governing. Refer to document S-1570 for more detailed information on the control.

**Simplified display for Rental operators** - simplified display tailored for Rental equipment operations for ease of use.

**Masterless Load Demand (MLD)** - The controller is capable of smartly managing power from paralleled generators to match varying load patterns.

**Power management** - Control function provides battery monitoring and testing features and smart starting control system.

**Advanced control methodology** - Three phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.

**Regulation compliant** - Prototype tested: UL, CSA and CE compliant.

**Service** - InPower™ PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.

**Easily upgradeable** - PowerCommand controls are designed with common control interfaces.

**Reliable design** - The control system is designed for reliable operation in harsh environment.

### Operator panel features

#### Operator/display functions

- Displays paralleling breaker status
- Provides direct control of the paralleling breaker
- 320 x 240 pixels graphic LED backlight LCD
- Auto, manual, start, stop, fault reset and lamp test/panel lamp switches
- Alpha-numeric display with pushbuttons
- Heated HMI
- LED lamps indicating genset running, remote start, not in auto, common shutdown, common warning, manual run mode, auto mode and stop

#### Paralleling control functions

- First Start Sensor™ system selects first genset to close to bus
- Phase lock loop synchronizer with voltage matching
- Sync check relay
- Isochronous kW and kVar load sharing
- Enhanced safety features for paralleling generators

#### Alternator data

- Line-to-Neutral and Line-to-Line AC volts
- 3-phase AC current
- Frequency
- kW, kVar, power factor kVA (three phase and total)

#### Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Comprehensive FAE data (where applicable)

#### Other data

- Fault history
- Data logging and fault simulation (requires InPower)

### Standard control functions

#### Digital governing

- Integrated digital electronic isochronous governor
- Temperature dynamic governing

#### Digital voltage regulation

- Integrated digital electronic voltage regulator
- 3-phase, 4-wire Line-to-Line sensing
- Configurable torque matching

#### AmpSentry™ AC protection

- AmpSentry protective relay
- Over current and short circuit shutdown
- Over current warning
- Single and three phase fault regulation
- Over and under voltage shutdown
- Over and under frequency shutdown
- Overload warning with alarm contact
- Reverse power and reverse Var shutdown
- Field overload shutdown

#### Engine protection

- Battery voltage monitoring, protection and testing
- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Cranking lockout
- Sensor failure indication
- Full authority electronic engine protection

#### Control functions

- Time delay start and cool down
- Real time clock for fault and event time stamping
- Cycle cranking
- Load shed
- Remote emergency stop

## Ratings definitions

### Standby:

Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated.

### Prime (unlimited running time):

Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514).



## Dimensions

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Weight w/o fuel kg (lbs)	Weight with fuel kg (lbs)	Fuel capacity liters (gal)*
C100D2RE	3063 (121)	1262 (50)	1953 (77)	2522 (5560)	2976 (6560)	495 (131)
With trailer	4798 (189)	2106 (83)	2444 (96)	3221 (7100)	3674 (8100)	495 (131)

\* Onboard DEF capacity is sized for 24 hours of operation at 10 gallons.

## Fuel consumption

	Standby				Prime				
60 Hz Ratings, kW (kVA)	100 (125)				90 (113)				Hours of operation
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	75% load
US Gal/hr	2.3	3.8	5.3	7.1	2.2	3.5	4.8	6.3	27
L/hr	8.7	14.2	19.9	26.9	8.2	13.1	18.3	24.0	27

Note: DEF consumption less than 4% of fuel consumption.

## Trailer information

Model	Tire size	Tire type	Load range	Number of tires per trailer	Lug pattern
C100D2RE	225/75-R15	Radial	2535 lbs - each	4	6 hole

## Certifications

These generator sets are certified to following standards:



CAN/CSA STD C22.2 NO. 100  
CAN/CSA STD C22.2 NO. 14

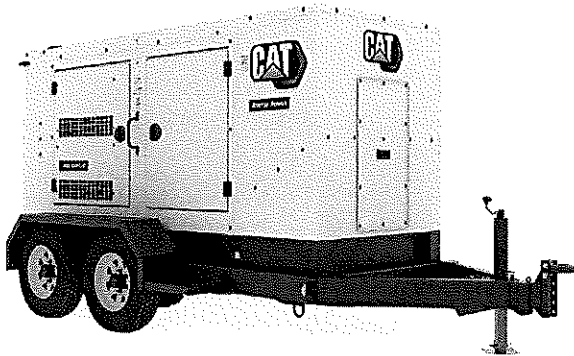
For more information contact your local Cummins distributor  
or visit [power.cummins.com](http://power.cummins.com)

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PDA062H283 NAS-6299-EN (02/20)

## Cat® XQ125 Rental Generator Set



**Standby 110 kW, 137 kVA**  
**Prime 100 kW, 125 kVA**  
**U.S. EPA Tier 4 Final**  
**60 Hz**  
**1800 RPM**

Image shown may not reflect actual configuration

### Specifications

Generator	Frequency	Voltage	Standby kW (kVA)	Prime kW (kVA)	Phase	Amp (A)
Standard	60 Hz	480/277V	110 (137)	100 (125)	3-phase	150.35
	60 Hz	208/120V	110 (137)	100 (125)	3-phase	346.97
	60 Hz	240/120V	65 (65)	65 (65)	1-phase	270.83
Optional	60 Hz	600V/349V	110 (137)	100 (125)	3-phase	120.28
	60 Hz	480V/277V	110 (137)	100 (125)	3-phase	150.35
	60 Hz	208/120V	110 (137)	100 (125)	3-phase	346.97
	60 Hz	240/120V	64 (64)	64 (64)	1-phase	266.67

Cat® C4.4 ACERT™ Diesel Engine	Metric	Imperial (English)
Configuration	I-4, 4-Stroke - Water Cooled Diesel	
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 L	268.5 in³
Aspiration	Turbocharged-Aftercooled	
Compression Ratio	16.5:1	
Engine rpm	1800	
Governor Type	ADEM™ A4	



## Features & Benefits

### Fuel/Emissions Strategy

- Meets U.S. EPA Tier 4 Final emission standards and CARB certified for non-road mobile applications at all 60 Hz ratings

### Design Criteria

- Meets ISO 8528 transient response and linear vibration
- Canadian Standards Association (CSA) Certified

### Single-source Supplier

- Package is factory designed and production tested
- Manufactured in ISO 9001:2000 certified Caterpillar facility

### Cat C4.4 ACERT Diesel Engine

- Four-stroke diesel engine with ACERT technology combined with electronic engine controller offers consistent performance and excellent fuel economy
- Series turbocharged with smart wastegate
- Low ownership costs enabled by a 3,000 hrs service interval for multi-vee belts and service free tappets
- Oil and fuel filter change intervals: 500 hrs

### Cat Clean Emissions Module (CEM)

- Engine mounted Aftertreatment module contains of Diesel Oxidation Catalyst (DOC) and Selective Catalytic Reduction (SCR)
- Aftertreatment remains invisible to the equipment operator when in use
- No requirement for ash servicing
- Service free for life of the engine

### Diesel Exhaust Fluid (DEF) System

- DEF tank provides more than 24 hrs run time @ 75% load.
- Electrically heated DEF lines

### Cat Generator

- Matched to the performance and output characteristics of Cat engines
- Integrated voltage selector switch
- UL 1446 Recognized Class H insulation

### Cat Integrated Voltage Regulator (Cat IVR)

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

### Cat EMCP 4.2B Control Panel

- Electronic control panel provides power metering, protective relaying, engine and generator parameter viewing, and expanded AC metering
- Graphical display (3.8 in.) denotes text alarm/ event descriptions, set points, engine and generator monitoring, and is visible in all lighting conditions
- Simple, user-friendly interface and navigation
- Automatic set-point adjustment integrated with voltage selection

### Sound-attenuated Enclosure

- Provides excellent weather protection and allows for a quiet package operation with less than 66 dBA sound levels at full load, while offering excellent service access with multiple doors and access panels
- Galvanized sheet steel body panels for improved corrosion resistance
- Coolant and oil drains along with auxiliary fuel connections are all conveniently located at one location on the exterior of the enclosure for easy access
- Single point lifting

### Fuel System

- Provides 24-hour runtime @ 75% prime
- Meets UL 142, ULC 601
- OPTIONAL: Meets Transport Canada (UN31A) requirements with factory-installed, optional vent kit

### Reduced Environmental Impact

- 110% spill containment of onboard engine fluids

### Cooling System

- Provides 50°C ambient capability @ full rating
- Coolant low-level shutdown switch
- Coolant recovery system for easy top off

### Charging System

- Charging alternator; 12V-100A, heavy duty with integral regulator and belt guards
- 10-Watt Solar maintainer for batteries

### Asset Monitoring and Management

- Product Link™ Generation (PLG) hardware provides two-way communication for remote control and equipment monitoring via cellular network
- Customer-defined, equipment-based, real-time status updates and alerts
- Flexible and customer-configurable user interface
- GPS provides asset location and geo-fencing

## Factory-installed Standard Equipment

### Engine

- Cat C4.4 ACERT heavy-duty diesel engine meets Tier 4 Final emission standards

### Engine Air Inlet

- Heavy-duty air cleaner with dust cup and service indicator
- Turbocharger and air-to-air after cooler

### Cat CEM

- Engine mounted CEM
- Robust operation in cold weather and low loads
- Includes DOC and SCR

### DEF System

- 8 gal (30 L) plastic DEF tank provides capacity to meet or exceed fuel tank runtime at any given load.
- DEF tank is equipped with integrated level sensor and heating element to aid in cold weather operation.
- Electrically heated DEF lines
- DEF level gauge located on the control panel
- Equipped with low and critically-low level alarms and a critically-low shutdown

### Fuel System

- 150 gal (568 L) double-wall fuel tank
- Fuel fill located in an isolated enclosed space away from the engine compartment with a lockable door
- Designed to meet UL 142, ULC 601
- Provides 24-hour runtime @ 75% prime
- Engine mounted electric priming pump
- Auxiliary connections for customer-supplied fuel transfer system with 3-way fuel transfer valve
- Engine mounted primary fuel filter with integral water separator
- Engine-mounted secondary fuel filter

### Cooling System

- Provides 50°C ambient capability @ full rating
- Vertically mounted radiator with engine mounted cooling fan
- 50/50 Extended Life Coolant
- Coolant low-level shutdown switch
- Coolant recovery system
- Coolant drain line with valve

### Mounting System

- Engine, generator and radiator soft mounted to the heavy duty, fabricated steel base frame

### Sound-attenuated Enclosure

- Provides excellent weather protection
- Offers a quiet package with 66 dBA sound levels
- Rugged, corrosion-resistant construction:
  - Galvanealed, sheet steel body panels with zinc phosphate pre-treatment prior to polyester powder coating
- Excellent access for service and maintenance:
  - Two doors on each side of the enclosure provides clear access to routine service and maintenance needs.
  - Two rear doors provide access to power distribution and control panel access
  - Separate door for DEF and Diesel fill access
  - Access panel on the front provides access to clean radiator cores and to service DEF tank.
  - Lube oil drain, coolant drain, external fuel supply and return lines are all piped to exterior of the enclosure and located on one panel for easy access.
- Security and safety features:
  - Pad lockable latches on all access doors
  - Exterior emergency stop (E-stop) button

### Lube System

- Open crankcase breather with filter
- Oil drain line with internal valve routed to connection point accessible from exterior
- 500-hour engine oil change interval

### Starting System

- Single electric starting motor, 12VDC
- Single 12V (850 CCA) maintenance-free battery with disconnect switch, battery rack, and cables
- 120V single-phase block heater

### Quality

- Factory testing of standard generator set and complete power module
- UL, NEMA, ISO, and IEEE standards
- O&M manuals
- CSA Certified
- Full manufacturer's warranty

### Shore Power

- One 110V shore power connection for powering engine block heater and generator space heater (optional), battery charger (optional), and single duplex service receptacle
- Includes controls to de-energize block and generator space heaters when the engine is running

## **Cat® XQ125 Rental Generator Set**

### **Factory-installed Optional Equipment**

#### **Vent Kit**

- Provides necessary vents and films to upgrade the standard UL142 certified tank to meet Transport Canada (UN31A) certification

#### **Trailer Electric**

- Two-axle trailer with Electric brakes

#### **Trailer Hydraulic**

- Two-axle trailer with Hydraulic brakes

#### **Battery Charger**

- 10A, 12 VDC output
- UL & CSA listed

#### **Hitches**

- 3" Pintle OR 2-5/16" Ball

#### **Generator Space Heater**

- 110 VAC Anti-condensation heater

#### **Permanent Magnet Generator (PMG)**

- Adds independent source of excitation to generator

#### **NEMA Receptacles**

- 208 Volt locking NEMA receptacles, quantity 2

#### **600V Generator**

- Includes 600V generator and 4-position rotary switch for easy selection of desired output
- Available voltages include:
  - 3-phase (600/347 Volt, 480/277 Volt, 208/120 Volt)
  - 1-phase (240/120 Volt)



## Technical Data

Cat Generator	
Frame size	LC3114F
Pitch	2/3
No. of poles	4
No. of leads	12
Excitation	Self Excited
Number of bearings	Single bearing, close coupled
Insulation	Class H
Enclosure	Drip proof IP23
Alignment	Pilot shaft
Overspeed capability – % of rated	125% of rated
Voltage regulator	3-phase sensing with volts-per-hertz
Voltage regulation (adjustable to compensate for engine speed droop and line loss)	Less than $\pm 1/2\%$ voltage gain
Wave form deviation	3%
Telephone Influence Factor (TIF)	Less than 50
Harmonic Distortion (THD)	Less than 5%

Cat Generator Set			
	Units	60 Hz — Standby	60 Hz — Prime
<b>Power Rating</b>	<b>kW (kVA)</b>	<b>110 (137)</b>	<b>100 (125)</b>
Performance Specification			
<b>Lubricating System</b>			
Oil pan capacity	L (gal)	9.4 (2.5)	9.4 (2.5)
<b>Fuel System</b>			
Fuel consumption — 100% Load	L/hr (gal/hr)	31.3 (8.27)	28.4 (7.49)
75% Load	L/hr (gal/hr)	-	20.9 (5.51)
50% Load	L/hr (gal/hr)	-	14.4 (3.80)
25% Load	L/hr (gal/hr)	-	7.5 (1.97)
Fuel tank capacity	L (gal)	568 (150)	568 (150)
Run time @ 75% rating	Hr		28
<b>DEF System</b>			
DEF consumption — 100% Load	L/hr (gal/hr)	1.2 (0.31)	0.47 (0.12)
75% Load	L/hr (gal/hr)	-	0.72 (0.19)
50% Load	L/hr (gal/hr)	-	0.39 (0.10)
25% Load	L/hr (gal/hr)	-	0.45 (0.12)
DEF tank capacity	L (gal)	30 (7.92)	30 (7.92)
Run time @ 75% rating	Hr		42
<b>Cooling System</b>			
Ambient capability	°C (°F)	55 (131)	55 (131)
Engine & radiator coolant capacity	L (gal)	18.3 (4.8)	18.3 (4.8)
<b>Noise Rating (with enclosure)</b>			
@ 7 meters (23 feet) @ 75% rating	dB(A)	66	65



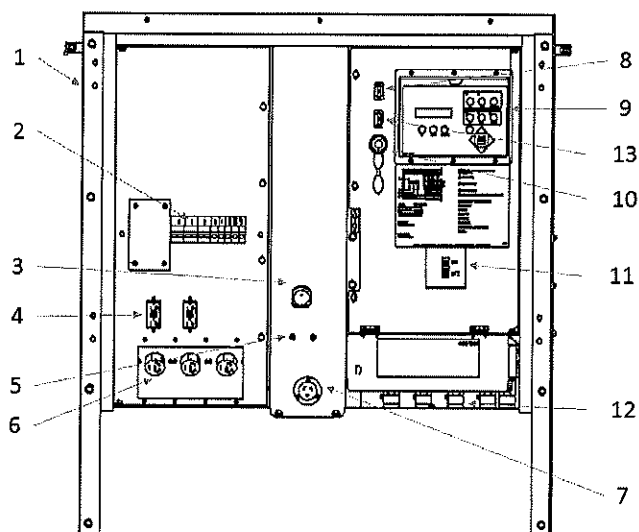
## Cat® XQ125 Rental Generator Set

### Technical Data (continued)

Dimensions and Weights					
Model	Length mm (in)	Width mm (in)	Height mm (in)	With Lube Oil & Coolant Kg (lb)	With all fluids Kg (lb)
XQ125	3,222 (127)	1,244 (49)	1,858 (73)	2,372 (5,230)	2,876 (6,341)
XQ125 with trailer (electric brakes)	4,475 (176)	1,981 (78)	2,179 (86)	2,812 (6,200)	3,316 (7,311)
XQ125 with trailer (hydraulic brakes)	4,495 (177)	1,981 (78)	2,179 (86)	2,821 (6,220)	3,325 (7,331)

## Control Panel and Power Distribution Layout

Item	Description
1	Steel enclosure with hinged, lockable doors (not shown)
2	Circuit breakers for receptacles
3	Emergency stop
4	2X Single-phase GFCI duplex receptacles (20A @ 120V)
5	Two-wire remote start terminals
6	3X Single-phase, California-style, twist-lock receptacles, 50A @ 208V phase-to-phase, 120V phase to neutral, or 240/120 single-phase when in that voltage position
7	Single-phase, NEMA locking input receptacle, (30A @ 120V) to power block heater, battery charger and generator space heater
8	Glow plug lamp
9	EMCP 4.2B digital generator set controller
10	Cat ET service tool connector
11	Generator main circuit breaker
12	Main bus connection (bus bars with 13 mm holes) behind hinged cover with safety switch
13	HEST/DPF Regen Lamp



### Ratings Definitions and Conditions

**Meets or Exceeds International Specifications:** AS1359, CSA, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-33.

**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. Prime power in accordance with ISO3046. Prime ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature below the alarm temperature.

**Standby** — 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.

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

**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 Caterpillar 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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