Cat® XQ125 Rental Generator Set



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

Image shown may not reflect actual configuration.

Specifications

Frequency	Generator	Voltage LL/LN	Prime ekW (kVA)	Phase	Amp (A)
60 Hz	Standard	480/277V	100 (125)	3-phase	150.4
		208/120V	100 (125)	3-phase	347.0
		240/120V	65 (65)	1-phase	270.8
50 Hz	Optional	415/239V	100 (125)	3-phase	173.9
		400/230V	100 (125)	3-phase	180.4
		380/219V	100 (125)	3-phase	189.9

Cat® C4.4 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 in^3
Aspiration	Twin Turbocharged-Aftercooled	
Compression Ratio	16.5:1	
Engine rpm	1800	
Governor Type	Electronic ADEM™ A4	

Benefits & Features

Fuel/Emissions Strategy

- Meets U.S. EPA Tier 4 Final and EU5 emission standards and CARB certified for non-road mobile applications at all 50/60 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 Diesel Engine

- Four-stroke diesel engine with ACERT technology combined with electronic engine controller offers consistent performance and excellent fuel economy
- Series turbocharged
- 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)
- 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

Automatic Voltage Regulator (AVR)

- A109 excitation module
- Three-phase sensing
- Provides precise control, excellent block loading, and constant voltage in the normal operating range
- Adjustable voltage via potentiometer

XQCP Control Panel

- Electronic control panel provides power metering, protective relaying, engine, and generator parameter viewing, and expanded AC metering
- Four lines back-lit LCD text display
- Simple, user-friendly interface and navigation
- Integrates with the Automatic Voltage Regulator (AVR) to provide precise control, excellent block loading, and constant voltage

Sound-attenuated Enclosure

- Provides excellent weather protection and allows for a quiet package operation with less than 68.7 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 base frame 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-150A, heavy duty with integral regulator and belt guards
- 55-Watt Solar maintainer for batteries

Asset Monitoring and Management

- Telematics hardware provides two-way communication for remote control and equipment monitoring via cellular network
- Flexible and customer-configurable user interface
- GPS provides asset location and geo-fencing

Factory-installed Standard Equipment

Engine
- Cat C4.4 heavy-duty diesel engine meets Tier 4 Final and EU5 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 68.7 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 base frame 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 heater and generator space heater when the engine is running

Factory-installed Standard Equipment *(continued)*

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

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

Technical Data

Cat Generator	
Frame size	SE: LC3114F; PMG: LC3134F
Pitch	2/3
No. of poles	4
No. of leads	12
Excitation	Self Excited or PMG (option)
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 ± 0.5% voltage gain
Wave form deviation	3%
Telephone Influence Factor (TIF)	Less than 50
Harmonic Distortion (THD)	Less than 5%

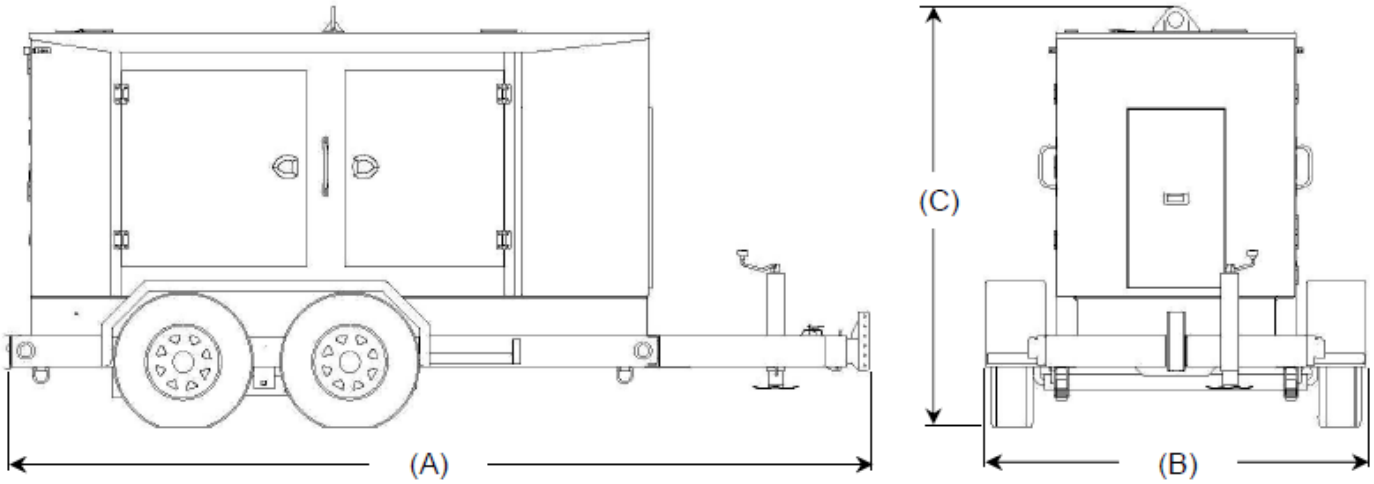
Cat Generator Set		
	Units	**60 Hz — Prime**
Power Rating	kW (kVA)	100 (125)
Performance Specification		
Lubricating System Oil pan capacity	 L (gal)	 9.4 (2.5)
Fuel System Fuel Consumption — 100% Load 75% Load 50% Load 25% Load Fuel Tank Capacity Running Time — @ 75% Load	 L/hr (gal/hr) L/hr (gal/hr) L/hr (gal/hr) L/hr (gal/hr) L (gal) Hr	 24.2 (6.4) 18.3 (4.8) 12.9 (3.4) 7.6 (2.0) 568 (150) 31
DEF System Fuel Consumption — 100% Load 75% Load 50% Load 25% Load DEF Tank Capacity Running Time — @ 75% Load	 L/hr (gal/hr) L/hr (gal/hr) L/hr (gal/hr) L/hr (gal/hr) L (gal) Hr	 0.47 (0.12) 0.72 (0.19) 0.39 (0.10) 0.45 (0.12) 30 (7.92) 31
Cooling System Ambient capability Engine & radiator coolant capacity	 °C (°F) L (gal)	 50 (122) 19.5 (5.2)
Air Requirements Combustion air flow Max dirty air cleaner restriction	 m^3/min (cfm) kPa (in H_2O)	 34.6 (1223) 6.2 (24.9)
Noise Rating (with enclosure) @ 7 meters (23 feet) @ 75% rating	 dB(A)	 68.7

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	3,261 (128.4)	1,243 (48.9)	1,856 (73)	2,344 (5,167)	2,848 (6,278)
XQ125 with trailer (electric brakes)	4,475 (176)	1,981 (78)	2,174 (85.5)	2,784 (6,137)	3,288 (7,248)
XQ125 with trailer (hydraulic brakes)	4,495 (177)	1,981 (78)	2,174 (85.5)	2,793 (6,157)	3,297 (7,268)

General Layout Dimensions

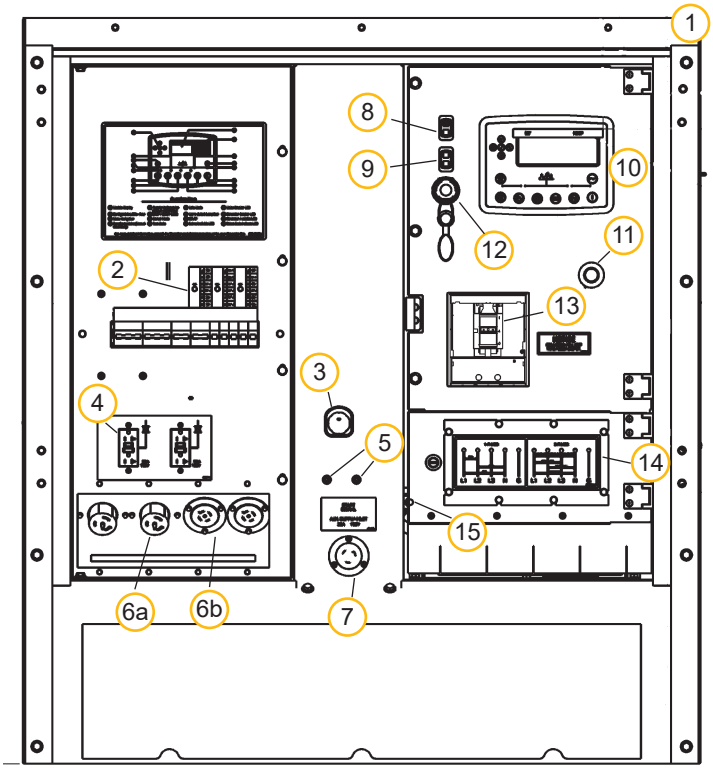
Dimensions in millimeters (inches).
Shown with optional trailer.



Cat® XQ125 Rental Generator Set

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	2 x Single-phase GFCI duplex receptacles (20A @ 120V)
5	Two-wire remote start terminals
6A	3 x 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
6B	2 x Single-phase, California-style, twist-lock receptacles, and 2 x NEMA locking output receptables. (Optional)
7	Single-phase, NEMA locking input receptacle, (30A @ 120V) to power block heater, battery charger and generator space heater
8	HEST and DPF lamp
9	Glow plug lamp
10	XQCP digital generator set controller
11	Potentiometer for voltage adjustment
12	Cat ET service tool connector
13	Generator main circuit breaker
14	Main bus connection (bus bars with 13 mm holes) behind hinged cover with safety switch
15	Breaker trip door switch



Ratings Definitions and Conditions

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034-1, ISO 3046, ISO 8528, 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 ekW 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 ambient shown indicate ambient temperature at 100% load which results in a coolant top tank temperature below the alarm temperature.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO 3046 standard conditions.

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 Caterpillar representative for details. For information regarding low sulfur fuel and biodiesel capability, please consult your Cat dealer.

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