



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<br>kW (kVA) | Prime<br>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 <sup>®</sup> 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 <sup>3</sup> |  |
| 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 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

# Automatic Voltage Regulator (AVR)

- D350 excitation module
- Three-phase sensing
- Adjustable volts-per-hertz regulation
- Provides precise control, excellent block loading, and constant voltage in the normal operating range

#### **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 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<sup>™</sup> 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 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



# **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)
  - o 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<br>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 |  |
| Power Rating                          | kW (kVA)            | 110 (137)       | 100 (125)     |  |
| Pe                                    | rformance Specifica | tion            |               |  |
| Lubricating System                    |                     |                 |               |  |
| Oil pan capacity                      | L (gal)             | 9.4 (2.5)       | 9.4 (2.5)     |  |
| Fuel System                           |                     |                 |               |  |
| 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            |  |
| DEF System                            |                     |                 |               |  |
| 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                  |                 | 24            |  |
| Cooling System                        |                     |                 |               |  |
| Ambient capability                    | °C (°F)             | 55 (131)        | 55 (131)      |  |
| Engine & radiator coolant capacity    | L (gal)             | 18.3 (4.8)      | 18.3 (4.8)    |  |
| Noise Rating (with enclosure)         |                     |                 |               |  |
| @ 7 meters (23 feet) @ 75% rating     | dB(A)               | 66              | 65            |  |
| · · · · · · · · · · · · · · · · · · · |                     |                 |               |  |
|                                       |                     |                 |               |  |
|                                       |                     |                 |               |  |

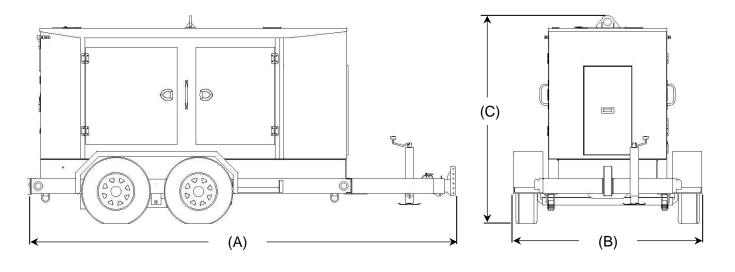


# **Technical Data (continued)**

| Dimensions and Weights                |                       |                      |                       |  |                             |
|---------------------------------------|-----------------------|----------------------|-----------------------|--|-----------------------------|
| Model                                 | Length mm (in)<br>(A) | Width mm (in)<br>(B) | Height mm (in)<br>(C) | With Lube Oil<br>& Coolant<br>Kg (lb.) | With all fluids<br>Kg (lb.) |
| XQ125                                 | 3,261 (128.4)         | 1,243 (48.9)         | 1,856 (73)            | 2,372 (5,230)                          | 2,876 (6,341)               |
| XQ125 with trailer (electric brakes)  | 4,475 (176)           | 1,981 (78)           | 2,174 (85.5)          | 2,812 (6,200)                          | 3,316 (7,311)               |
| XQ125 with trailer (hydraulic brakes) | 4,495 (177)           | 1,981 (78)           | 2,174 (85.5)          | 2,821 (6,220)                          | 3,325 (7,331)               |

# **General Layout Dimensions**

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





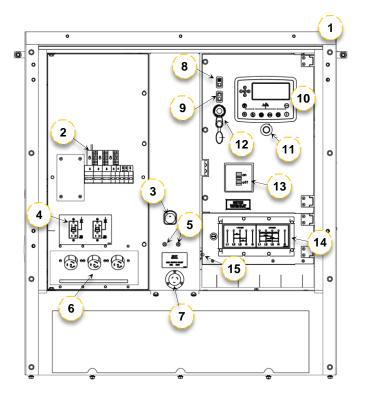
# **Control Panel and Power Distribution Layout**

| 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<br>receptacles, 50A @ 208V phase-to-phase,<br>120V phase to neutral, or 240/120 single-<br>phase when<br>in that voltage position |
| 7    | Single-phase, NEMA locking input<br>receptacle, (30A @ 120V) to power block<br>heater, battery charger and generator space<br>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<br>holes) behind hinged cover with safety<br>switch  |
| 15   | Breaker trip door switch  |



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 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.



**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.

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