

Cat® XQP550 Rental Generator Set



**Prime 550 kVA (440 kW)
50/60 Hz
EU Stage V**

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 | 550 | 440 | 765 | 1250 |
| | | 400 / 230 V | 550 | 440 | 794 | |
| | | 380 / 220 V | 500 | 440 | 836 | |
| 60 | 1800 | 480 / 277 V | 588 | 470 | 707 | 1250 |
| | | 440 / 254 V | 588 | 470 | 772 | |
| | | 380 / 220 V | 588 | 470 | 893 | |

| Cat® 18 Diesel Engine | Metric | Imperial (English) |
|-----------------------|---|------------------------|
| Configuration | Inline 6-cylinder, 4-Stroke-Cycle, Water Cooled, Diesel | |
| Bore | 145 mm | 5.71 in |
| Stroke | 183 mm | 7.20 in |
| Displacement | 18.1 L | 1104.5 in ³ |
| Aspiration | 16.0:1 | |
| Compression Ratio | 1500/1800 | |
| Engine rpm | ATAAC | |
| Aftercooler Type | Single | |
| Turbocharger | Direct Injection | |
| Fuel System | Electronic ECM controlled (A6E4) | |
| Governor Type | See Fuel Specification Table | |
| Fuel | See Fuel Specification Table | |

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
- Robust busbar connection for lugged cable connection
- AC protected by limit switch on distribution door

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® C18 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

XQCP 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

Optional Control Panel

- ComAp IntelliGen NTC, DeepSea 8620, DEIF AGC-4
 - o Synchronising capabilities
 - o Motorised breaker
 - o Ethernet remote monitoring

Available Options

- Synchronising 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 – 2x 12V 950CCA maintenance-free Cat

Batteries

- Battery Isolator – Single pole (padlockable)
- 24V battery charger
- Drains option Pack – Oil and coolant drains piped to baseframe

Cat LC6100 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
- Five (5) main doors and two (2) service access doors for improved service access.
- Secure design with safety glass control panel viewing window and padlockable or keylock access doors
- 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*

Standard Equipment

Generator

- LC6114K frame; 3-phase random wound, 12 lead, self-excited, 2/3 pitch
- Coastal insulation protection (CIP)

Cat® C18 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

- High Efficiency two stage air cleaner, with service indicator

Cooling System

- Variable speed fan
- 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; 24V, heavy duty with integral regulator and belt guards

Starting System

- Single 24V electric starting motor

Fuel System

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

Control Panel

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

Distribution System

- Separate robust steel enclosures for control & distribution sections
- Distribution door protected with 24V DC shunt trip safety switch
- 4 pole, 1250A 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

- Single stage oil filters
- Open crankcase ventilation filter system piped to discharge box
- 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) |
| EU Stage V specifies Ultra Low Sulphur Diesel | | UUltra Low Sulphur Diesel Only (ULSD). ULSD with a maximum fuel sulphur level of either 15 or 20 ppm ¹ is required in all diesel applications with aftertreatment. 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 (Preferred) |

DEF Specifications

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

Technical Data

| Cat® Generator | |
|--|---|
| Frame size | LC6114K |
| 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 Telephone Influence Factor (TIF) Harmonic Distortion (THD) | Less than 2% Less than 2% |

| Cat Generator Set | | | |
|-------------------------------------|------------------------------|-------------------------|-------------------------|
| | TMI Performance No. Units | Prime — 50 Hz EM6174 | Prime — 60 Hz EM6176 |
| Power Rating | kVA (kW) | 550 (440) | 588 (470) |
| Performance Specification | | | |
| Lubricating System | | | |
| Oil pan capacity | L (gal) | 70 (18.5) | |
| Fuel System | | | |
| Fuel consumption — 100% Load | L/hr (gal/hr) | 126.3 (33.4) | 129.7(34.3) |
| 75% Load | L/hr (gal/hr) | 94.5 (24.9) | 98.8 (26.13) |
| 50% Load | L/hr (gal/hr) | 64.3 (16.9) | 70.6 (18.67) |
| Fuel tank capacity | L (gal) | 1125 (297) | 1125 (297) |
| Running time @ 75% rating | Hr | 11.9 | 11.4 |
| After Treatment* | | | |
| DEF Tank Capacity | L (gal) | 92 (24.3) | |
| Cooling System | | | |
| Ambient capability | °C (°F) | 45 (113) | 43 (109.4) |
| Engine & radiator coolant capacity | L (gal) | 54 (14.3) | 54 (14.3) |
| Engine coolant capacity | L (gal) | 27 (7.1) | 27 (7.1) |
| Air Requirements | | | |
| Combustion air flow | m ³ /min (cf m) | 34.2 (1207.8) | TBC |
| Exhaust System | | | |
| Exhaust flow at rated — dry exhaust | m ³ /min (cf m) | 92 (3249) | TBC |
| Exhaust temperature at rated kW | °C (°F) | 547 (1017) | 668 (1234) |

Technical Data (continued)

| Cat Generator Set | | | |
|---|------------------------------|-------------------------|-------------------------|
| | TMI Performance No. Units | Prime — 50 Hz EM6174 | Prime — 60 Hz EM6176 |
| Noise Rating (with enclosure) ** | | | |
| Sound Power* | dB(A) | 98 | 100 |
| @ 7 meters @ 75% load | dB(A) | 70.38 | 70.5 |
| @ 7 meters @ 100% load | dB(A) | 71.92 | 73.69 |
| @ 1 meter @ 75% load | dB(A) | 79.19 | 82.12 |
| @ 1 meter @ 100% load | dB(A) | 81.42 | 83.08 |
| Emissions data at 100% Load | | | |
| NOx | g/hp-hr | 0.69 | 0.33 |
| CO | g/hp-hr | 0.01 | 0.00 |
| HC | g/hp-hr | 0.02 | 0.01 |
| PM | g/hp-hr | 0.00 | 0.01 |

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

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

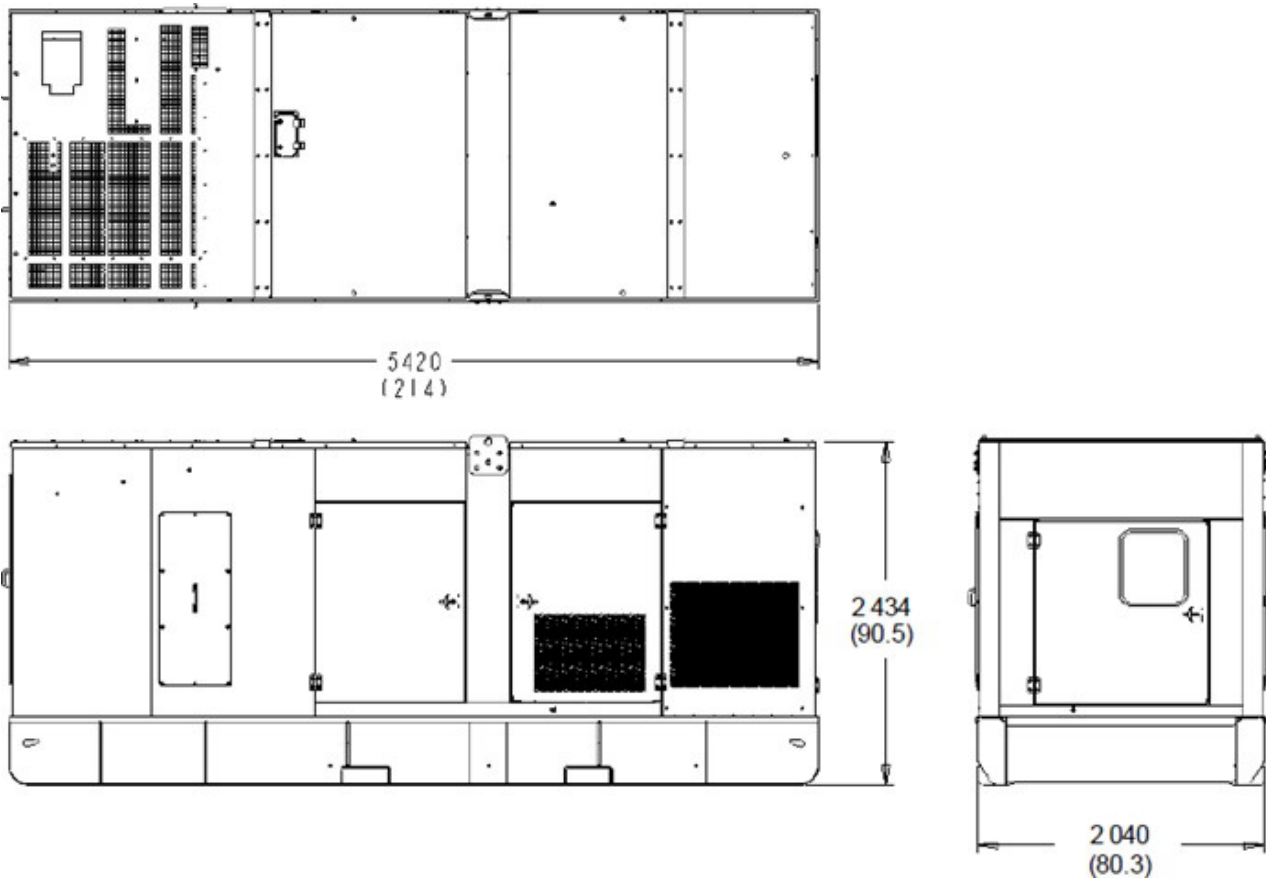
Weights & Dimensions

| Dimensions | Length mm (in) | Width mm (in) | Height mm (in) |
|---------------|----------------|---------------|----------------|
| Generator Set | 5 420 (213.3) | 2 040 (80.3) | 2 434 (90.5) |

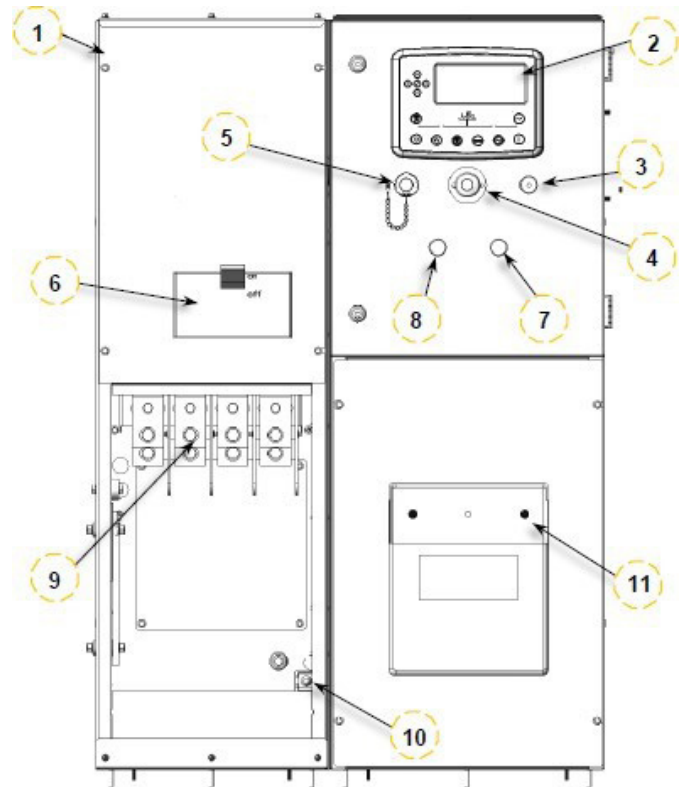
| Weight | |
|--------------------------------------|------------------|
| | Weight — kg (lb) |
| Lube Oil & Coolant — Empty Fuel Tank | 6 740 (14 860) |
| Full Fuel Tank | 7 885 (17 384) |

Layout for General Dimensions

Dimensions in millimeters (inches)



| Item | Description |
|------|--|
| 1 | Steel enclosure with hinged, lockable door (not shown) |
| 2 | XQCP digital genset controller |
| 3 | Alarm Horn |
| 4 | Emergency Stop button |
| 5 | Service tool connector |
| 6 | Electrically operated 1250A Circuit Breaker |
| 7 | Emission system failure lamp |
| 8 | Low DEF level lamp |
| 9 | Main bus connection (bus bars with 8 and 12 mm holes) |
| 10 | Micro safety switch for bus bar door |
| 11 | Manual holder |



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 ISO 3046 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/electricpower

©2024 Caterpillar
All rights reserved.

Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow" the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.