Cat® XQP150 Rental Generator Set

Image shown may not reflect actual configuration

Prime 150kVA (120kW)
50/60 Hz Switchable
EU Stage IIIA

Specifications

Frequency (Hz)	Speed (rpm)	Voltage	Prime		Output Amps (A)	Breaker Rating (A)
			kVA	kW		
50	1500	415 / 240 V	150	120	209	250
		400 / 230 V	150	120	217	
		380 / 220 V	150	120	228	
60	1800	480 / 277 V	182	146	219	250
		440 / 254 V	182	146	239	
		380 / 220 V	160	128	243	
		240 / 139 V	182	146	438	630
		220 / 127 V	182	146	478	

Cat® C7.1 ACERT™ Diesel Engine	Metric	Imperial (English)
Configuration	Inline 6-cylinder, 4-Stroke-Cycle, Water Cooled, Diesel	
Bore	105 mm	4.13 in
Stroke	135 mm	5.31 in
Displacement	7.01 L	427 in^3
Aspiration	Turbocharged-Aftercooled (TA)	
Compression Ratio	16.5:1	
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	

Benefits & Features

Rental-ready Features

- 24hr dual wall fuel tank
- Forklift pockets
- Integrated heavy duty drag bar with robust skid plate base
- Externally certified single point lift
- Coolant and oil drains piped to baseframe
- Externally certified spark arrest silencer
- 50/60Hz frequency switch via terminal link
- Optimized cable entry for easy hook-up
- Robust busbar connection for lugged cable connection
- Sound isolated side mounted control panel with integrated power distribution access
- AC protected by limit switch on distribution door

Available Options

- CE socket box with integrated MCB & RCBO protection
- Clipsal socket box with integrated MCB & RCBO protection
- 220-240V 3-phase 60Hz configuration available with appropriately sized breaker and power cables.
- Anti condensation heater 110V or 230V AC
- Coolant heater 110V or 230V AC
- 12V battery charger
- Permanent Magnet Generator (PMG)
- Earth leakage detection
- Lube oil sump pump

Fuel/Emissions Strategy

- EU Stage IIIA

Single-source Supplier

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

Cat C7.1 ACERT™ Diesel Engine

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

Cat EMCP 4.2B 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

Cat LC3100 Generator

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

Integrated Voltage Regulator (IVR)

- 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

- Dual wall base tank with 110% spill containment
- Bund Level alarm
- Low noise enclosure
- Inboard mounted 3-way valve for external fuel connection

Cat Connect

- Fleet management and asset tracking*

*Subject to local certifications

Standard Equipment

Generator
- LC3114J frame; 3-phase random wound, 12 lead, self excited, 2/3 pitch
- Coastal insulation protection (CIP)

Cat C7.1 ACERT™ Diesel Engine
- Turbocharged, air-to-air aftercooler
- Electronic ECM control

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
- Coolant piped to base via radiator-mounted ball valve
- 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
- 2x12V 950CCA maintenance-free batteries (connected in parallel) with padlockable single-pole isolator switch

Fuel System
- 24hr dual wall fuel tank (based on 75% Prime load)
- Internal fuel fill
- Engine-mounted primary fuel filter with water separator (10 micron) Includes water in fuel sensing
- Manual push button priming pump
- Auxilary connections for remote supply with 3-way valve
- 3-way valve internally mounted within bunded area
- Mechanical fuel gauge
- Electronic fuel gauge with panel display, low fuel level warning and shutdown

Control Panel
- EMCP 4.2B set mounted digital controller
- 50/60Hz frequency switch (via terminal link)
- IVR with EM10 excitation module
- Panel & enclosure mounted emergency stop

Distribution System
- Single robust steel enclosure for controls & distribution
- Separately hinged distribution door with 12V DC shunt trip safety switch
- 4 pole, 250 A 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
- Heavy duty drag bar with skid plates
- 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
- Front and rear service access provided through hinged doors
- External single point lift
- Powder coated with Cat Rental Power decals

Exhaust System
- Integrated certified spark arresting silencer with flexible connectors
- Outlet box mounted with vertical discharge

Lube Oil System
- On-engine primary and secondary oil filters, dipstick and oil filler
- Open crankcase breather with fumes disposal container and drain point
- Oil piped to edge of baseframe with internally mounted ball valve
- 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)
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		

Technical Data

Cat Generator	
Frame size	LC3114J
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 P4390D**	**Prime — 60 Hz P4390C**
Power Rating	kVA (kW)	150 (120)	181 (145)
Performance Specification			
Lubricating System Oil pan capacity	 L (gal)	 12.4 (3.3)	
Fuel System Fuel consumption — 100% Load 75% Load 50% Load Fuel tank capacity Running time @ 75% rating	 L/hr (gal/hr) L/hr (gal/hr) L/hr (gal/hr) L (gal) Hr	 37.5 (9.9) 29.6 (7.8) 20.3 (5.4) 590 (156) 20	 42.3 (11.2) 34.7 (9.2) 23.8 (6.3) 17
Cooling System Ambient capability 21 (5.5)Engine & radiator coolant Engine coolant capacity	 °C (°F) L (gal) L (gal)	 46 (115) 22 (5.8) 9.5 (2.5)	 46 (115) 22 (5.8) 9.5 (2.5)
Air Requirements Combustion air flow	 m^3/min (cfm)	 11.4 (402.6)	 14.9 (525.5)
Exhaust System Exhaust flow at rated — dry exhaust Exhaust temperature at rated kW	 m^3/min (cfm) °C (°F)	 26.4 (932) 491 (916)	 30.6 (1079) 440 (824)
Noise Rating (with enclosure)* **Sound Power*** @ 7 meters @ 75% load @ 7 meters @ 100% load @ 1 meter @ 75% load @ 1 meter @ 100% load	 dB(A) dB(A) dB(A) dB(A) dB(A)	 91 63.9 64.7 73.1 74.2	 95 67.1 67.5 76.4 76.8

*Guaranteed sound power as per 2000/14/EC

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

Technical Data (continued)

Dimensions			
	Length mm (in)	Width mm (in)	Height mm (in)
Generator Set	3520 (138.6)	1120 (44.1)	2226 (87.6)

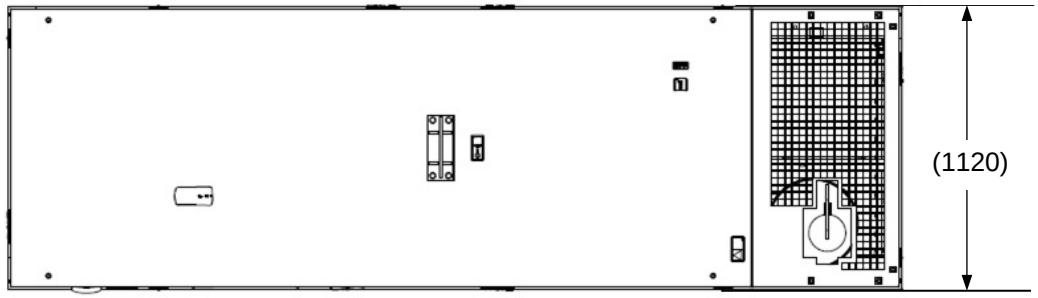
Weight	
	Weight — kg (lb)
Lube Oil & Coolant — Empty Fuel Tank	2547 (5615)
Full Fuel Tank	3124 (6887)

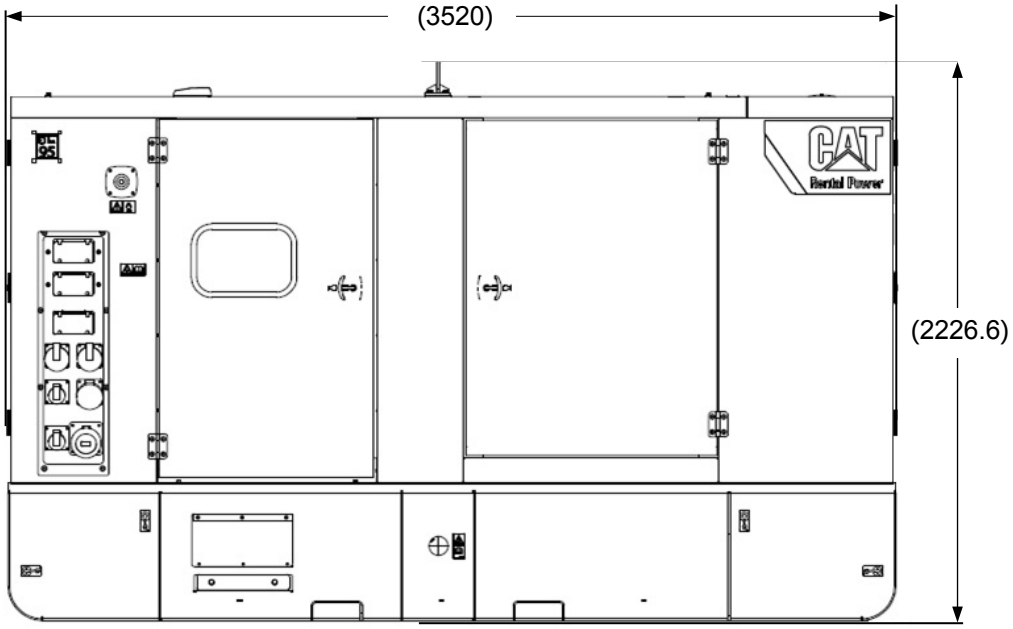
Sockets	15A	16A	32A	50A	63A	125A
Clipsal*	1	–	–	2	–	–
CEE Form*	–	2x1ph+N+E	2x3ph+N+E	–	1x3ph+N+E	1x3ph+N+E

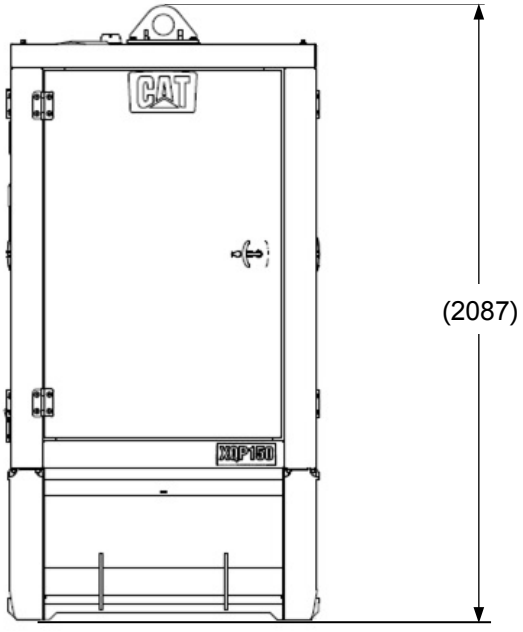
*Busbar connection is standard. Distribution sockets are optional.

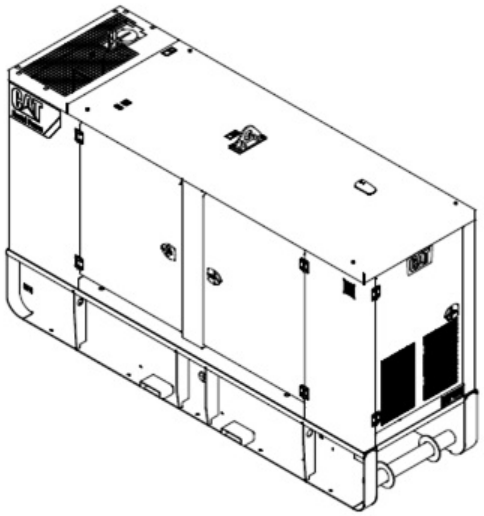
Layout for General Dimensions

Dimensions in millimeters



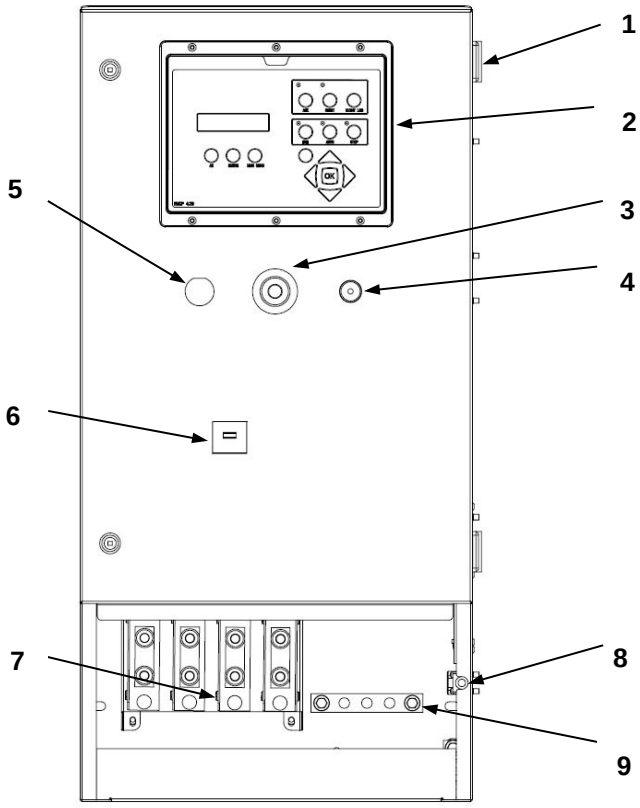






Control Panel and Power Distribution Layout

Item	Description
1	Steel enclosure with hinged, lockable door
2	EMCP 4.2B
3	Emergency Stop button
4	Alarm
5	Service tool connector
6	Circuit breaker. 4-pole molded case
7	Main bus connection (bus bars with M12 studs)
8	Micro safety switch for bus bar door
9	Main earth terminal



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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