



**Standby 200 kW**

**Prime 182 kW**

**60 Hz 1800 rpm**

**U.S EPA Tier4 Final**

## SPECIFICATIONS

Frequency	Voltage	Standby kW (kVA)	Prime kW (kVA)	Speed rpm
480V 60 Hz Rating				
60 Hz	480/277V	200 (250)	182 (228)	1800
60 Hz	208/120V	200 (250)	182 (228)	1800
60 Hz	240/120V	150 (150)	136 (136)	1800

## ENGINE SPECIFICATIONS

Engine Model	Cat® C7.1 ACERT™ Diesel Engine
Configuration	Inline, 4-Stroke - Water Cooled Diesel
Bore	105 mm (4.13 in)
Stroke	135 mm (5.3 in)
Displacement	7.01 L (427.7 in3)
Aspiration	Turbocharged-Aftercooled
Compression Ratio	16.5:1
Engine rpm	1800
Governor Type	Electronic

## BENEFITS & FEATURES

### 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
- Requires Ultra Low Sulfur Diesel (ULSD) Fuel

### QUALITY

- Factory designed and production tested to assure customer satisfaction
- Manufactured in ISO 9001:2000 certified facility

### CAT® C7.1 ACERT™ DIESEL ENGINE

- Four-stroke diesel engine with ACERT offers consistent performance and excellent fuel economy
- Series turbocharged with smart wastegate for fast response, High power and increased torque
- Low ownership costs enabled by multi-vee belts and service free hydraulic tappets
- Oil and fuel filter change intervals: 500 hrs

### AFTER TREATMENT / CLEAN EMISSIONS EQUIPMENT

- Package mounted Aftertreatment module contains of Diesel Oxidation Catalyst (DOC), Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR)
- Passive regeneration is transparent to operator.
- No requirement for ash servicing
- Service free for life of the engine
- DEF tank provides > 24 hrs run time.
- Electrically heated DEF lines

### CAT LC SERIES GENERATOR

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

### 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
- PLC Functionality
- Integrate with Integrated Voltage Regulator (IVR) 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 72 dBA sound levels at full load, while offering excellent service access with multiple doors and access panels
- Galvanealed sheet steel body panels for improved corrosion resistance.
- Coolant and oil drains piped to exterior of enclosure.

### FUEL SYSTEM

- Provides 24-hour runtime @ 75% prime
- Meets UL 142, ULC 601 and UN 31A (Transport Canada)

### DESIGN FEATURES

- 110% spill containment of all engine fluids
- Battery Charger
- Generator Anti – condensation Heater
- Engine Block Heater
- Provides 43°C ambient capability @ full rating

### ASSET MONITORING AND MANAGEMENT

- CAT Connect hardware provides remote equipment monitoring via cellular network
- Provides Operational status, Alarms, Engine and Genset Parameters
- Customer-defined, equipment-based, real-time status updates and alerts
- Flexible and customer-configurable user interface
- GPS provides asset location and geo-fencing

## STANDARD EQUIPMENT

### Engine

- Cat C7.1 ACERT, heavy-duty diesel engine meets Tier4F emissions Standard
- CEM Mounted off engine
- Block heater, 1000 Watt, 110-120 VAC
- Requires Ultra Low Sulfur Diesel (ULSD) fuel
- Engine electrical system:
  - 24V, DC electrical system
  - 115A, DC charging alternator
  - Electronic governor and engine controls
  - Oil pressure, coolant temperature, and coolant level shutdown sensors
- Engine filtration system:
  - Cartridge-type air filter with service indicator
  - Cartridge-type fuel filter with upstream pre- filter and water separator
  - Spin-on, full-flow lube oil filter; requires API CJ-4 lube oil

### GENERATOR AND VOLTAGE REGULATION

- Screen protected and drip-proof (IP23), self-regulating, 12-lead, 4-pole, brushless generator
- Sealed-for-life bearing
- PMG Excitation
- Voltage selection switch mounted to generator terminal box. 3-position with 480V generator
- Anti-condensation, space heater, 250-Watt, 110-120 VAC
- Insulation system:
  - Class H insulation system
  - Windings impregnated in a thermo-setting moisture-, oil-, and acid-resisting varnish
  - Heavy coat of anti-tracking varnish for additional protection against moisture or condensation
- IVR:
  - EMCP provides Voltage regulation
  - Improved transient response performance capability using patented TLR Feature

### GENERATOR SET PACKAGING

- Base frame with intergral double wall fuel tank and leak detection switch
  - Heavy-duty, fabricated steel base frame with specially-designed lifting points
  - Integral containment tray atop base frame, with leak-detection switch
- Canopy:
  - Sound attenuated to 72 dBA at 7m (23 ft)
  - Two doors on each side for power distribution and control panel access

- Cooling system:
  - Cooling system provides 43°C (109°F) ambient capability at 500 m (1640 ft) above sea level
- Electrical system:
  - 24V, DC electrical system
  - 850 CCA, maintenance-free, wet batteries
  - Battery disconnect switch, lockable
  - Solar battery charger with solar array
  - Resettable, switch-style circuit breakers (DC circuit)
- Engine and generator mounting:
  - Engine and generator directly coupled by SAE flange
  - Engine flywheel flexibly coupled to the generator rotor, with full torsional analysis completed to ensure no harmful vibration will occur in the assembly
  - Anti-vibration pads between engine/generator feet and base frame
- Fuel system:
  - 24 hour runtime @ 75% prime load
  - 2-position valves and external ports (3/4-16) JIC allow connection of an auxiliary fuel source
- CSA 22.2 Certified

### GENERATOR CONTROLS AND POWER DISTRIBUTION

- EMCP 4.2B, digital generator set controller, mounted behind a hinged, lockable door with viewing window
- Manually-operated circuit breaker: 3-pole molded case breaker, UL Listed and CSA Certified with shunt trip and LSIG Trip Unit
- Safety switch on lower access door - trips breaker if cover is opened
- Remote start-stop terminals
- Customer auxiliary power connections:
  - Three - 250V, 50A California-style, twist lock receptacles
  - Two - 120V, 20A duplex receptacles with GFCI\*
  - Each receptacle protected by a miniature circuit breaker, which also acts as an on/off switch
- Main customer connections:
  - Tin-plated copper bus bars with phase separators, located behind a protective door with shunt trip switch
  - Bus Bars sized for full load capacity of generator set at 0.8 power factor

### QUALITY AND PRODUCT SUPPORT

- Factory load-testing of complete generator set
- Factory test certificate available upon request
- Equipment meets the following standards: BS 4999, BS 5000, BS 5514, IEC 60034, EN 61000-6, NEMA MG 1-22 & CSA
- Full set of operation and maintenance manuals

\* Voltage at receptacle is 120V when switch is in 240/120 and 208 positions, and 139V in 480V position.

## OPTIONAL EQUIPMENT

- Paralleling Controls
  - EMCP 4.4 paralleling Controller
  - Electrically operated circuit breaker with under voltage trip and LSIG trip Voltage
  - MGDL (Ethernet Communication) for Paralleling interconnect with other units
- 208 3-Phase NEMA Sockets
- Camlock (Available in 2019) Distribution System

## TECHNICAL DATA

Cat Generator Set - 1800 rpm/60 Hz		
	Units	Prime
<b>Power Rating</b>	kW (kVA)	182 (227.5)
<b>Performance Number</b>		P4350C
<b>Performance Specification</b>		
<b>Lubricating System</b>		
Capacity oil	L (gal)	16 (4.3)
<b>Fuel System</b>		
Fuel consumption**		
100% Load	L/hr (gal/hr)	56 (14.7)
75% Load	L/hr (gal/hr)	41 (10.8)
50% Load	L/hr (gal/hr)	28 (7.4)
DEF tank capacity	L (gal)	992 (262)
<b>Fuel Run Time @ 75% Prime Load</b>	Hours	>24
<b>DEF System</b>		
DEF Consumption**		
100% Load	L/hr (gal/hr)	1.42 (0.38)
75% Load	L/hr (gal/hr)	1.11 (0.29)
50% Load	L/hr (gal/hr)	0.68 (0.18)
Fuel tank capacity	L (gal)	46 (12.2)
<b>DEF Run Time @ All Power Settings</b>	Hours	>24
<b>Cooling System</b>		
Radiator system capacity including engine	L (U.S. gal)	38.7 (10.2)
Heat rejected to coolant at rated power	kW (Btu/min)	135 (7660)
<b>Air Requirements @ 1800 rpm, 100% load</b>		
Combustion air flow	m3/min (cfm)	14 (494)
Maximum dirty air cleaner restriction	kPa (inches H2O)	6.23 (25)
<b>Noise Rating**</b> with enclosure at 7 meters (23 feet)	dB(A)	72

Cat Generator		
Frame size	LC5034H	
Pitch	2/3	
No. of poles	4	
Insulation	Class H	
Enclosure	Drip proof IP23	
Voltage regulator	3-phase sensing with volts-per-hertz	
Frequency regulation	0.5% at steady state from no load to full load	
Wave form deviation	THD <2%	
Overspeed limit	2250 rpm	
Available Voltages	Standard	Switchable voltage output: 480/277V, 3-phase; 208/120V, 3-phase; 240/120V, single-phase

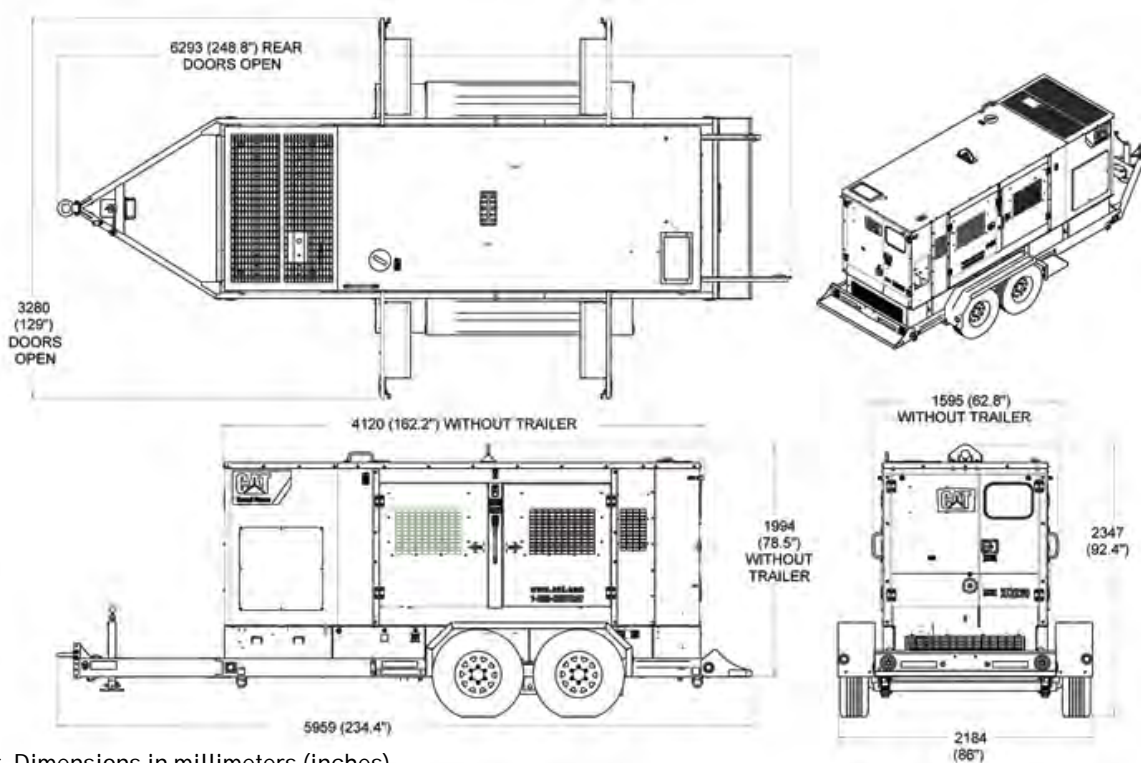
\*\*Package fuel Consumption and sound levels are for reference only

## DIMENSIONS AND WEIGHTS

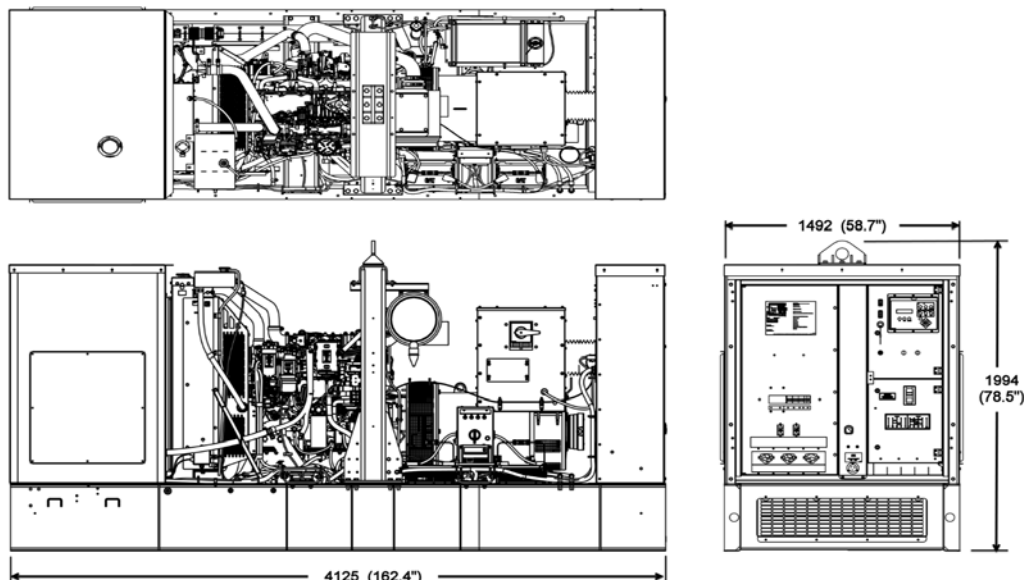
Model	Length mm (in)	Width mm (in)	Height mm (in)	With Lube Oil & Coolant Kg (lb)	With Fuel, Lube Oil & Coolant Kg (lb)
C7.1 OPEN	4,120 (162.2)	1,595 (62.8)	1,994 (78.5)	3434 (7556)	4331 (9529)
C7.1 Enclosed (without trailer)	4,120 (162.2)	1,595 (62.8)	1,994 (78.5)	3,828 (8,432)	4,720 (10,405)
C7.1 with trailer (electric brakes)	5,954 (234.4)	2,184 (86)	2,347 (92.4)	4,501 (9,902)	5,386 (11,875)
C7.1 with trailer (hydraulic brakes)	5,954 (234.4)	2,184 (86)	2,347 (92.4)	4,510 (9,922)	5,395 (11,895)

### General Layout Dimensions

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

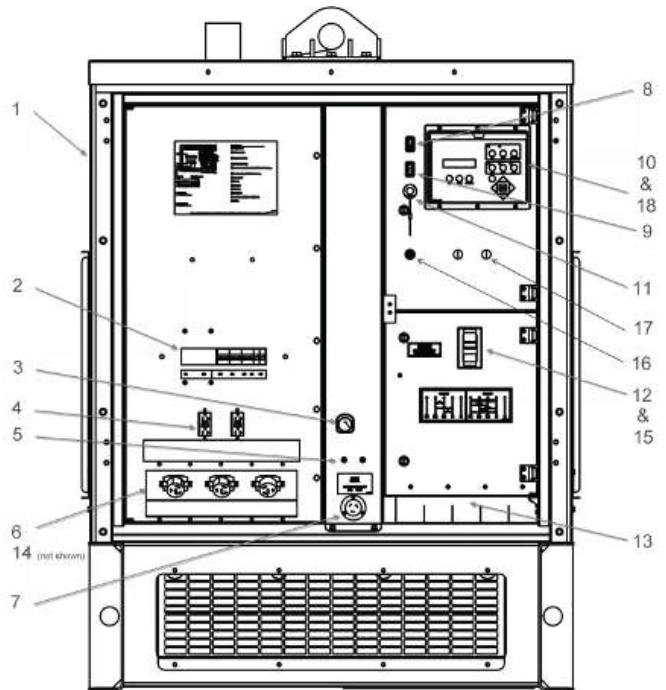


Open Set. Dimensions in millimeters (inches).



## CONTROL PANEL AND POWER DISTRIBUTION LAYOUT

1	Steel enclosure with hinged, lockable door (not shown)
2	Circuit breakers for receptacles
3	Emergency stop
4	Single-phase GFCI duplex receptacles (20A @ 120V)
5	Two-wire remote start terminals
6	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	HEST and DFP Lamp
9	Glow plug lamp
10	EMCP 4.2B digital generator set controller
11	Cat ET service tool connector
12	Manually operated circuit breaker, 3 pole, molded case, LSIG, 800A
13	Main bus connection (bus bars attached to breaker) behind door
14	3-phase NEMA locking receptacles, 208V (optional)
15	Electrically operated circuit breaker, 3 pole, molded case, LSIG, 800A (provided with paralleling option)
16	Alarm Horn
17	Circuit breaker open and close pushbuttons (provided with paralleling option)
18	EMCP 4.4 digital generator set controller (provided with paralleling option)





## EMCP 4 CONTROL KEY FEATURES

### EMCP 4 control features

- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

### Digital indication for:

- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF (4.2 only)

### Warning/shutdown with common LED indication of:

- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency Stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level



### Programmable protective relaying functions:

- PGenerator phase sequence
- Over/Under voltage (27/59)
- Over/Under Frequency (81 o/u)
- Reverse Power (kW) (32) (4.2 only)
- Reverse reactive power (kVAR) (32RV)
- Overcurrent (50/51)

### Communications:

- 4 digital inputs & 4 relay outputs (4.1)
- 6 digital inputs & 8 relay outputs (4.2)
- 12 digital inputs & 8 relay outputs (4.4)
- Customer data link (Modbus RTU) (4.2 only)
- Accessory module data link (4.2 only)
- Serial annunciator module data link (4.2 only)
- Emergency stop pushbutton

### Compatible with the following:

- 1 Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator

## FINANCING

Caterpillar offers an array of financial products to help you succeed through financial service excellence. Options include loans, finance lease, operating lease, working capital, and revolving line of credit. Contact your local Cat dealer for availability in your region.

## WORLDWIDE PRODUCT SUPPORT

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Caterpillar® SOS<sup>SM</sup> program effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

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