



## 200 ekW- 300 ekW

### 60 Hz

Standby	Prime
200ekW	180ekW
250ekW	225ekW
300ekW	275ekW

## BENEFITS & FEATURES

### CAT® GENERATOR SET PACKAGE

Cat generator set packages have been fully prototype tested and certified torsional vibration analysis reports are available. The packages are designed to meet the NFPA 110 requirement for loading, conform to the ISO 8528-5 steady state and fill transient response requirements.

### CAT DIESEL ENGINES

The four-cycle Cat diesel engine combines consistent performance with excellent fuel economy and transient response that meets or exceeds ISO 8528-5. The engines feature a reliable, rugged, and durable design that has been field proven in thousands of applications worldwide in emergency standby installations.

### COOLING SYSTEM

The cooling system has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

### GENERATORS

The generators used on Cat packages have been designed and tested to work with the Cat engine. The generators are built with robust Class H insulation and provide industry-leading motor starting capability and altitude capabilities.

### EMCP CONTROL PANELS

The EMCP controller features the reliability and durability you have to come to expect from your Cat equipment. The EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

## SPECIFICATIONS

### ENGINE SPECIFICATIONS

Engine Model	Cat® C9 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	112mm x 149mm (4.4in x 5.9in)
Displacement	8.8 L (538 in³)
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4
Emission Certifications	EPA Tier 3 - EPA Stationary Emergency

### GENERATOR SET SPECIFICATIONS

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3 Pitch
No. of Leads	12
Available Voltage Options	600V/480V/240V/208V
Frequency	60Hz
Alternator Voltage	24V
Alternator Insulation & IP	Class H; IP23
Standard Temperature Rise	150 Deg C
Available Excitation Options	Self-Excited, AR
Voltage Regulation, Steady State +/-	≤0.5%



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تلفن همراه: +۹۸۹۳۹۹۶۰۳۸۰۰

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آدرس پست الکترونیکی: [info@atapars.com](mailto:info@atapars.com)

آدرس سایت: [www.atapars.com](http://www.atapars.com)

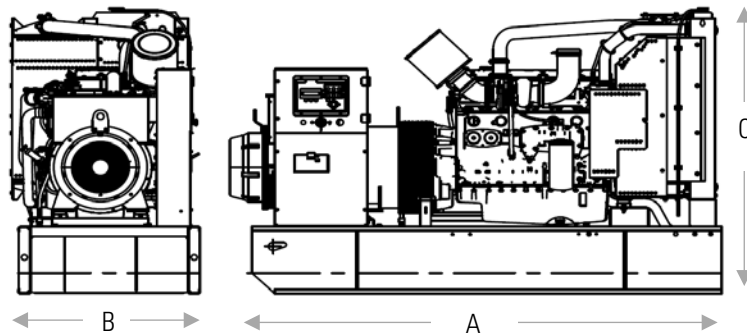
## STANDARD EQUIPMENT

Air inlet system	Aftercooler core, Turbocharger.
Control panels	EMCP4.2 control panel.
Cooling system	Coolant drain line with valve; terminated on edge of base.
	Fan and belt guards.
	Coolant Level Sensor
	Thermostats and housing, full open temperature 92 deg C (198 deg F).
	Coolant level sight gauge.
Exhaust system	Jacket water pump, gear driven, centrifugal.
	Exhaust manifold; dry.
Fuel system	Primary fuel filter w/integral water separator & secondary filter.
	Fuel cooler.
	Fuel priming pump.
	Flexible fuel lines.
	Engine fuel transfer pump.
Generators and generator attachments	Brushless, self-excited 2/3 pitch, random wound.
	IP23 Protection.
	Insulation Class H and temperature rise
	Power center, IP22 bottom cable entry
Governing system	Segregated low voltage wiring panel
	Cat Electronic Governor (ADEM A4).
Lube system	Oil cooler.
	Lubricating oil.
	Oil filter and dipstick.
	Oil drain lines with valve; piped to edge of base.
	- Fumes disposal; piped to front of radiator.
Starting/charging system	24-volt electric starting motor.
	24V, 45 amp charging alternator.
General	Paint, Caterpillar Yellow.
	Vibration damper.

## OPTIONAL EQUIPMENT

Air inlet system	STD AIR CLEANER
	Single Element Air Cleaner
	Dual Element Air Cleaner
Control panels	EMCP 4.4
	Local & Remote Annunciator
	Discrete I/O Module
Circuit Breakers	Power terminal strips- 800A & 600A
	3-Pole 100% Rated- Single (Manual & Motorised)
	3-Pole 100% Rated- Dual (Manual)
	3-Pole 100% Rated- Third (Manual)
Enclosures	External Paralleling
	Weather Protective
	Sound Attenuated
Cooling system	Aluminium Enclosures
	Stone guards.
Exhaust system	Industrial grade (10 dBA)
	Residential and Critical grade (25 dBA)
	Industrial grade (10 dBA)
Fuel storage	Sub Tank & Integral tank Bases
Generators and generator attachments	Space heater control
	Permanent magnet generator
Mounting system	Captive linear vibration isolators
Starting/charging system	Battery Chargers
	Jacket Water Heater
General	Tool Set.

## WEIGHTS & DIMENSIONS



Genset Package		Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Open Generator Set Weight (Dry) <sup>1</sup> kg (lb)	Maximum Weight (Dry) <sup>2</sup> kg (lb)
Standby	Prime					
<b>200 ekW</b>	<b>180 ekW</b>	3091 (122)	1622 (64)	2066 (82)	2157 (4755)	2692 (5935)
<b>250 ekW</b>	<b>225 ekW</b>	3091 (122)	1622 (64)	2066 (82)	2248 (4956)	2692 (5935)
<b>300 ekW</b>	<b>275 ekW</b>	3091 (122)	1622 (64)	2066 (82)	2313 (5100)	2908 (6411)

<sup>1</sup>Estimated weight includes standard generator, narrow skid base and heaviest mechanically operated standard single circuit breaker.

<sup>2</sup>Estimated weight includes oversize generator, wide skid base and heaviest circuit breaker configuration.



Image shown might not reflect actual configuration

## WEATHER PROTECTIVE & SOUND ATTENUATED FUEL TANKS

### FEATURES

- UL Listed for United States (UL 142) and Canada (CAN/ULC S601)
- Facilitate compliance with NFPA 30 code, NFPA 37 and 110 standards and CSA C282 code.
- Dual wall
- Lockable fuel fill cap, 4" (101.6mm) NPT
- Low fuel level warning standard, customer configurable warning or shutdown Primary tank leak detection switch in containment basin.
- Tank design provides capacity for thermal expansion of fuel
- Fuel supply dip tube is positioned so as not to pick up fuel sediment
- Fuel return and supply dip tube is separated by an internal baffle to prevent immediate re-supply of heated return fuel
- Pressure washed with an iron phosphate solution
- Interior tank surfaces coated with a solvent-based thin-film rust preventative
- Heavy gauge steel gussets with internal lifting rings
- Primary and secondary tanks are leak tested at 20.7 kPa (3 psi) minimum
- Compatible with open packages and enclosures
- Gloss black polyester alkyd enamel exterior paint
- Welded steel containment basin (minimum of 110% of primary tank capacity)
- Direct reading fuel gauge with variable electrical output
- Emergency vents on primary and secondary tanks are sized in accordance with NFPA 30

### Sub Base

- The sub-base fuel tank mounts below the generator set wide base

### Integral Base

- Integral diesel fuel tank is incorporated into the generator set base frame.
- Robust base design includes linear vibration isolators between tank base and engine generator.

### Options

- Audio/visual fuel level alarm panel
- 5gal (18.9 L) spill containment
- 5gal (18.9 L) spill containment with fuel fill drop tube with in 6" (152mm) from bottom of tank.
- 5gal (18.9 L) spill containment with overflow prevention valve and fuel fill drop tube with in 6" (152mm) from bottom of tank
- ULC Listed 7.5gal (28.4 L) spill containment with vent extensions, vent whistle, and drop tube facilitating compliance with CSA B139-09.
- ULC Listed 7.5gal (28.4 L) spill containment with overflow prevention valve, vent extensions, vent whistle and drop tube facilitating compliance with CSA B139-09

## Integral & Sub-Base Fuel Tank Base Capacities with Fuel Tank Dimensions & Weights

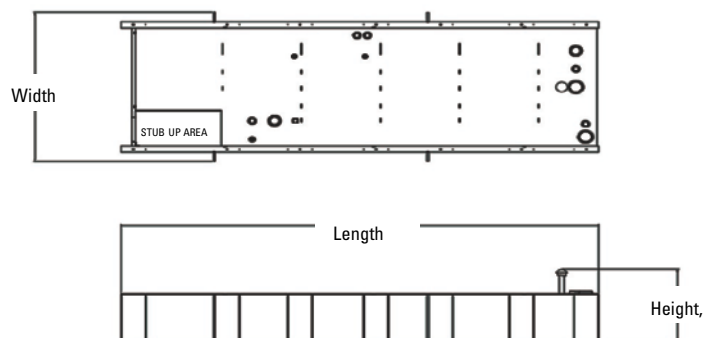
Integral – Width (W) 2014 mm (79.3 in); Sub-base – Width (W) 2056 mm (81.0 in)

Open Set, Weather Protective Enclosure & Sound Attenuated

C9 Tank Design	Feature Code	Total Capacity		Useable Capacity		Tank Only						Overall Package Height with Tank					
						Dry Weight		Height 'H'		Length 'L'		Open		Weather Protective		Sound Attenuated	
		Litre	Gallon	Litre	Gallon	kg	lb	mm	in	mm	in	mm	in	mm	in	mm	in
Integral	FTDW010	784	207	770	203	891	1964	635	25.0	3810	150.0	2360	90.0	2438	96.0	2492	98.1
Sub-Base	FTDW008	2476	654	2435	643	1468	3236	635	25.0	3810	150.0	2699	106.3	2777	109.4	2831	111.5
Sub-Base	FTDW009	3941	1041	3876	1024	1832	4039	635	25.0	5550	219.0	2699	106.3	2777	109.4	2831	111.5
Sub-Base	FTDW012	4285	1132	4221	1115	1542	3399	686	27.0	5550	219.0	5550	219.0	2750	108.3	2828	111.4

## Estimated Run Times (hours) at 100% Load

C9 Tank Design	Feature Code	Standby Ratings (ekW)			Prime Ratings (ekW)		
		300	250	200	275	225	180
Integral	FTDW010	9	11	13	10	11	14
Sub-Base	FTDW008	28	33	42	30	35	46
Sub-Base	FTDW009	45	53	67	48	56	73
Sub-Base	FTDW012	48	57	72	52	60	79



## Notes:

The heights listed above do not include lumber used during manufacturing and shipping.

Tanks with full electrical stub-up area include removable end channel. Tanks with RH/LH stub-up include stub-up area directly below the circuit breaker or power terminal strips. Dimensions include weather-protective enclosure exhaust system.

Dual wall sub-base tanks are UL Listed and constructed in accordance with UL Standard for Safety UL 142, Steel Aboveground Tanks for Flammable and Combustible Liquids and Canada CAN/ULC S601, Standard for Shop Fabricated Steel Aboveground Horizontal Tanks for Flammable and Combustible Liquids.

## Fuel tanks and applicable options facilitate compliance with the following United States NFPA Code and Standards:

NFPA 30: Flammable and Combustible Liquids Code

NFPA 37: Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines NFPA 110: Standard for Emergency and Standby Power Systems

## Fuel tanks and applicable options facilitate compliance with the following Canadian Standard and Code:

CSA C282 – Emergency Electrical Power Supply for Buildings

CSA B139-09 – Installation Code for Oil-Burning Equipment

## The following sub-base fuel tanks meet Chicago code for containment and labelling:

FTDW008

FTDW009

FTDW012



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تلفن همراه: +۹۸۹۳۹۹۶۰۳۸۰۰

تلفن دفتر مرکزی: +۹۸۲۱ - ۹۱۰۹۲۰۷۶

آدرس پست الکترونیکی: [info@atapars.com](mailto:info@atapars.com)

آدرس سایت: [www.atapars.com](http://www.atapars.com)



## SOUND ATTENUATED & HIGH AMBIENT ENCLOSURES

60 Hz

These Sound Attenuated & High Ambient, factory installed enclosures incorporate internally mounted super critical level silencers and residential level silencers respectively, designed for safety and aesthetic value on integral fuel tank base or optional dual wall integral fuel tank base for total fluid containment. These enclosures are of extremely rugged construction to withstand exposure to the elements and provide weather protection.

### FEATURES

#### Robust/Highly Corrosion Resistant Construction

- Factory-installed on skid base
- Environmentally friendly, polyester powder baked paint
- Zinc plated or stainless steel fasteners.
- Internally mounted-critical exhaust silencing system (sound attenuated only)
- Externally front-mounted enclosed exhaust silencing system (weather protective only)
- Designed and tested to comply with UL 2200 listed generator set package.
- Compression door latches providing solid door seal

#### Excellent Access

- Large cable entry area for installation ease.
- Accommodates side-mounted single or multiple breakers
- Two doors on both sides
- Vertically hinged allow 180° opening rotation and retention with door stays.
- Lube oil and coolant drains routed to the exterior of the enclosure base.

#### Transportability

- These enclosures are of extremely rugged construction to withstand outdoor exposure and rough handling common on many construction sites.
- Security and Safety
- Lockable access doors which give full access to control panel and breaker.
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill, and battery can only be reached via lockable access.
- Externally mounted emergency stop button
- Designed for spreader bar lifting to ensure safety
- Stub-up area is rodent proof.

#### Options

- Caterpillar yellow\* or white paint
- Weather protective enclosure constructed with 14-gauge steel
- Sound attenuated Level 1 constructed with 14-gauge steel
- Sound attenuated Level 2 constructed with 14-gauge steel
- Sound attenuated enclosure constructed with 12-gauge aluminum (5052 grade)
- UL Listed 203 gallon integral fuel tank
- UL Listed 660 or 1002 gallon sub base fuel tanks
- Seismic certification per applicable building codes:
  - IBC 2000, IBC 2003, IBC 2006,
  - IBC 2009, IBC 2012, CBC 2007, CBC 2010
- IBC certification for 150 mph wind loading
- Anchoring details are site specific and are dependent on many factors such as generator set size, weight and concrete strength.
- IBC certification requires that the anchoring system used is reviewed and approved by a professional engineer.
- Control panel viewing window\*\*
- Cold weather bundle. Available with SA Level 2 and Aluminum SA enclosures only.

\*\*Not available with aluminum enclosures

\*\*Steel sound attenuated only

## Enclosure Package Operating Characteristics

ENCLOSURE TYPE	STANDBY ekW	PRIME ekW	COOLING AIR FLOW RATE		AMBIENT CAPABILITY*				(DBA) @ 7M (23 FT) AT 100% LOAD
			m³/min	cfm	Standby		Prime		
					°C	°F	°C	°F	
SOUND ATTENUATED LEVEL 2	300	275	351	12395	46	115	50	122	71
	250	225	351	12395	53	127	56	133	71
	200	180	351	12395	59	138	60	140	71
SOUND ATTENUATED LEVEL 1	300	275	351	12395	46	115	50	122	75
	250	225	351	12395	53	127	56	133	74
	200	180	351	12395	59	138	60	140	73
	300	275	516	18222	49	120	52	126	82
WEATHER PROTECTIVE	250	225	516	18222	55	131	59	138	82
	200	180	516	18222	60	140	60	140	82
ALUMINUM SOUND ATTENUATED	300	275	351	12395	46	115	46	115	72
	250	225	351	12395	53	127	56	133	72
	200	180	351	12395	59	138	60	140	72

\*Cooling system performance at sea level. Consult your Caterpillar dealer for site specific ambient and altitude capabilities.

The sound pressure level data shown in the tables above is quoted as free field and is for guidance only. Actual levels produced may vary according to site conditions.

## Component Weights to Calculate Package Weight

Narrow Skid		Wide Skid		Steel Enclosure						Aluminum Enclosure	
				Weather Protective		Sound Attenuated Level 1		Sound Attenuated Level 2		Sound Attenuated	
kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
219	483	468	1032	660	1455	1062	2341	1062	2341	629	1387



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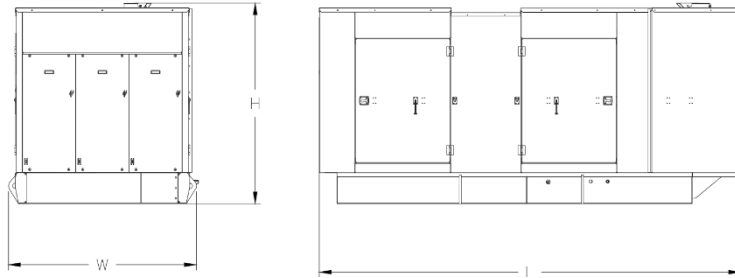
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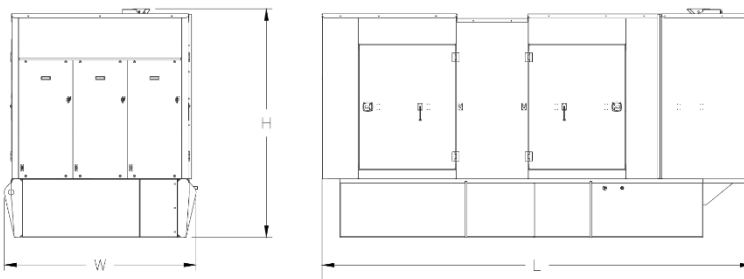
## Enclosure Weights and Dimensions

### A. Enclosure on Skid Base



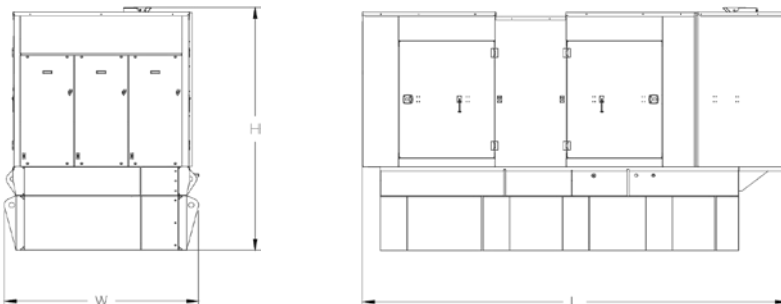
Enclosure Type	Length "L"		Width "W"		Height "H"	
	mm	in	mm	in	mm	in
Sound Attenuated	4515	177.8	2037	80.2	2196	86.5
Weather Protective	4035	158.9	2037	80.2	2142	84.3

### C. Enclosure on UL Listed 203 Gallon Integral Fuel Tank Base



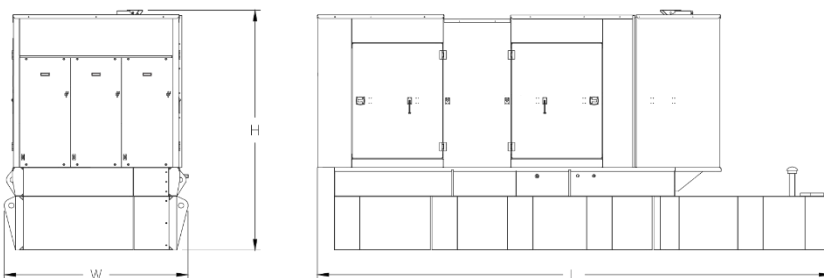
Enclosure Type	Length "L"		Width "W"		Height "H"	
	mm	in	mm	in	mm	in
Sound Attenuated	4515	177.8	2014	79.3	2492	98.1
Weather Protective	4035	158.9	2014	79.3	2438	96.0

### B. Enclosure on UL Listed 660 Gallon Sub Base Fuel Tank Base



Enclosure Type	Length "L"		Width "W"		Height "H"	
	mm	in	mm	in	mm	in
Sound Attenuated	4515	177.8	2056	80.9	2831	111.5
Weather Protective	4035	158.9	2056	80.9	2777	109.3

### D. Enclosure on UL Listed 1002 Gallon Sub Base Fuel Tank Base



Enclosure Type	Length "L"		Width "W"		Height "H"	
	mm	in	mm	in	mm	in
Sound Attenuated	5739	225.9	2056	80.9	2831	111.5
Weather Protective	5739	225.9	2056	80.9	2777	109.3

## 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:

- Generator 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:

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

## FINANCING

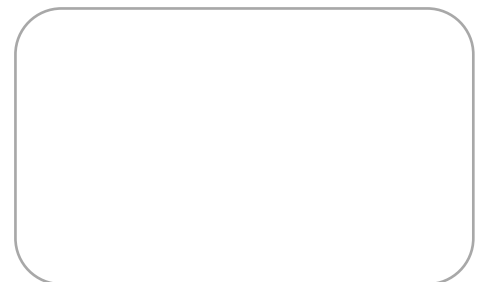
Caterpillar offers an array of financial products to help you succeed through financial service excellence. Options include loans, finance lease, operating lease, working capital, and revolving line of credit. Contact your local Cat dealer for availability in your region.

## 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.

## BUILT FOR IT.™

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تلفن همراه: +۹۸۹۳۹۹۶۰۳۸۰۰

تلفن دفتر مرکزی: +۹۸۲۱ - ۹۱۰۹۲۰۷۶

آدرس پست الکترونیکی: info@atapars.com

آدرس سایت: www.atapars.com