



**Prime 200 kVA (160 kW)  
50/60 Hz Switchable  
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	200	160	278	400
		400 / 230 V	200	160	289	
		380 / 220 V	190	152	289	
60	1800	480 / 277 V	225	180	271	400
		440 / 254 V	225	180	295	
		380 / 220 V	198	158	301	
		240 / 139 V	N/A	N/A	N/A	NA
		220 / 127 V	N/A	N/A	N/A	

Cat® C7.1 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	427.8 in <sup>3</sup>
Aspiration	Turbocharged-Aftercooled (TA)	
Compression Ratio	16.5:1	
Engine rpm	1500 –1800	
Aftercooler Type	ATAAC	
Turbocharger	Twin	
Fuel System	Direct Injection	
Governor Type	Electronic ECM controlled (A6E2)	
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 single point lift
- Certified spark arrest system
- 50/60 Hz frequency switch via terminal link
- EMC certified
- 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® C7 ACERT™ 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
- DEF tank capacity is sufficient to last more than 24 hrs when fully filled

### 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

### Optional Control Panel

- ComAp IntelliGen NTC, Deep Sea 7320, Deep Sea 8620, DEIF AGC-4
- Synchronising capabilities (except Deep Sea 7320)
- Motorised breaker (except Deep Sea 7320)
- Ethernet remote monitoring (except Deep Sea 7320)

### Available Options

- CE socket box with integrated MCB & RCBO protection
- 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
- Control Panel noise breakout option
- Drains option Pack – Oil and coolant drains piped to baseframe

### Cat LC5100 Generator

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

### Integrated Voltage Regulator (IVR)/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
- 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

- 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

- LC5114F frame; 3-phase random wound, 12 lead, self-excited, 2/3 pitch
- Coastal insulation protection (CIP)

### Cat® C7 Diesel Engine

- Twin turbocharged, air-to-air aftercooler
- Electronic ECM control

### After Treatment

- Engine 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 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
- 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

- 24 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

- EMCP 4.2B set mounted digital controller
- 50/60 Hz frequency switch (via terminal link)
- IVR with EM10 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, 400A 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

- On-engine primary and secondary oil filters, dipstick and oil filler
- Closed crankcase breather
- 500 hour oil change requirement

### General

- Factory Tested
- Full manufacturer's warranty, O&M manuals



**Fuel Specifications**

Specification Standard	Grade Class	Fuel Description
EU Stage V specifies Ultra Low Sulphur Diesel		Ultra Low Sulphur Diesel Only (ULSD) ULSD with a maximum fuel sulphur level of either 15 or 20 ppm1 is required in all diesel applications using a diesel particulate filter (DPF and DOC).  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	Minimum spec 15W-40 CJ-4 1E1867E

**DEF Specifications**

Specification Standard	DEF Description
EU Stage V DEF Requirements ISO22241-1	European automotive fuel (DERV)

**Technical Data**

<b>Cat® Generator</b>	
Frame size	LC5114F
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%

<b>Cat Generator Set</b>			
	<b>TMI Performance No. Units</b>	<b>Prime — 50 Hz T6316</b>	<b>Prime — 60 Hz T4902</b>
<b>Power Rating</b>	kVA (kW)	200 (160)	225 (180)
<b>Performance Specification</b>			
<b>Lubricating System</b>			
Oil pan capacity	L (gal)	17.1 (4.5)	
<b>Fuel System</b>			
Fuel consumption — 100% Load	L/hr (gal/hr)	43.4 (11.5)	54.3 (14.3)
75% Load	L/hr (gal/hr)	32.4 (8.6)	39.9 (10.5)
50% Load	L/hr (gal/hr)	22.1 (5.8)	27.3 (7.2)
Fuel tank capacity	L (gal)	822 (217)	822 (217)
Running time @ 75% rating	Hr	25	20
<b>After Treatment*</b>			
DEF Tank Capacity	L (gal)	32 (8.45)	
<b>Cooling System</b>			
Ambient capability	°C (°F)	40 (104)	40 (104)
Engine & radiator coolant capacity	L (gal)	33 (8.7)	33 (8.7)
Engine coolant capacity	L (gal)	13.2 (3.5)	13.2 (3.5)
<b>Air Requirements</b>			
Combustion air flow	m³/min (cfm)	12.6 (444.8)	14.2 (501.3)
<b>Exhaust System</b>			
Exhaust flow at rated — dry exhaust	m³/min (cfm)	13.8 (487)	16.8 (593)
Exhaust temperature at rated kW	°C (°F)	480 (896)	480 (896)

\*DEF consumption is on average approximately 4% of the fuel consumption.

**Technical Data (continued)**

Cat Generator Set			
	TMI Performance No. Units	Prime — 50 Hz T6316	Prime — 60 Hz T4902
<b>Noise Rating (with enclosure) **</b>			
<b>Sound Power*</b>			
@ 7 meters @ 75% load	dB(A)	93.8	97.0
@ 7 meters @ 100% load	dB(A)	64.6	TBC
@ 1 meters @ 75% load	dB(A)	66.1	TBC
@ 1 meter @ 100% load	dB(A)	75.1	TBC
	dB(A)	76.1	TBC
<b>Emissions data at 100% Load</b>			
Nox	g/hp-hr	TBC	TBC
CO	g/hp-hr	TBC	TBC
HC	g/hp-hr	TBC	TBC
PM	g/hp-hr	TBC	TBC

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

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

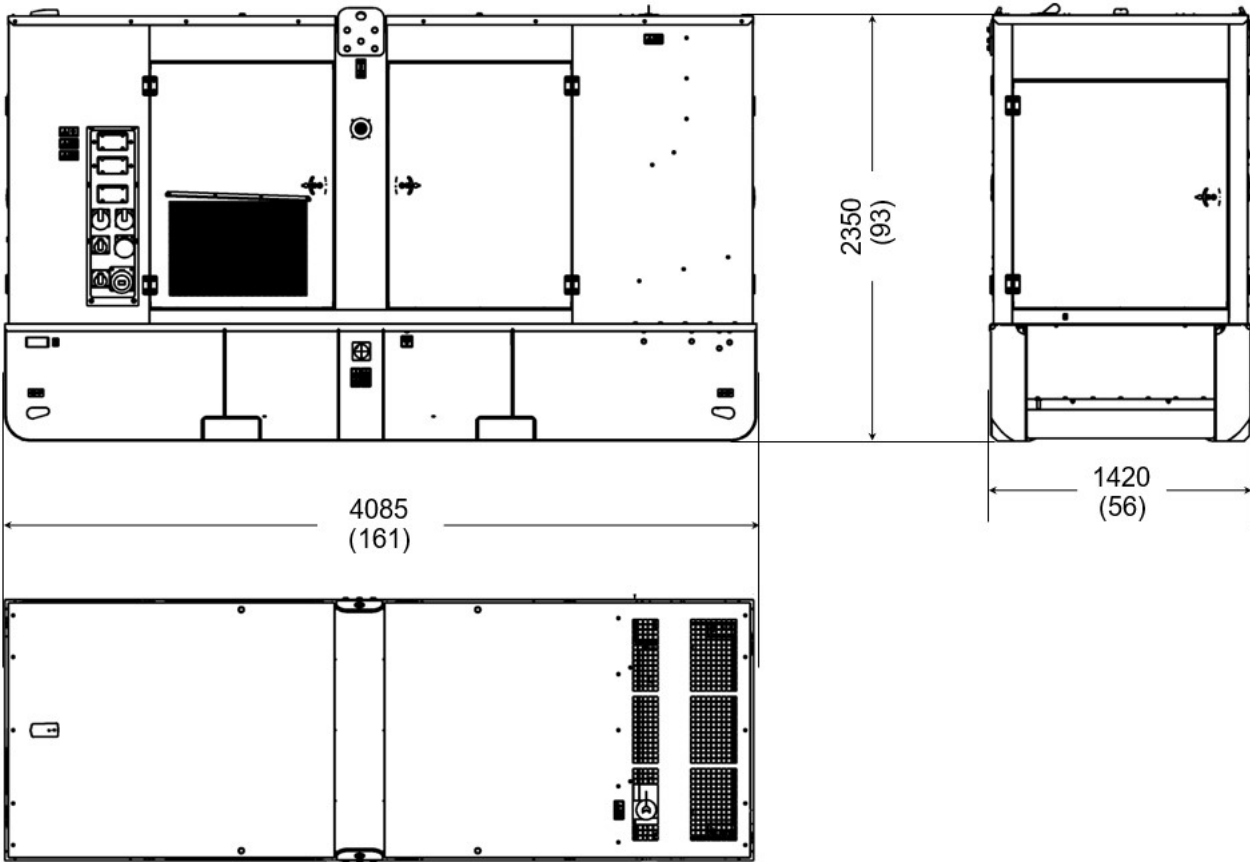
Dimensions			
	Length — mm (in)	Width — mm (in)	Height — mm (in)
Generator Set	4085 (161)	1420 (56)	2350 (93)

Weight	
	Weight — kg (lb)
Lube Oil & Coolant — Empty Fuel Tank	3651 (8049)
Full Fuel Tank	4487 (9892)

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

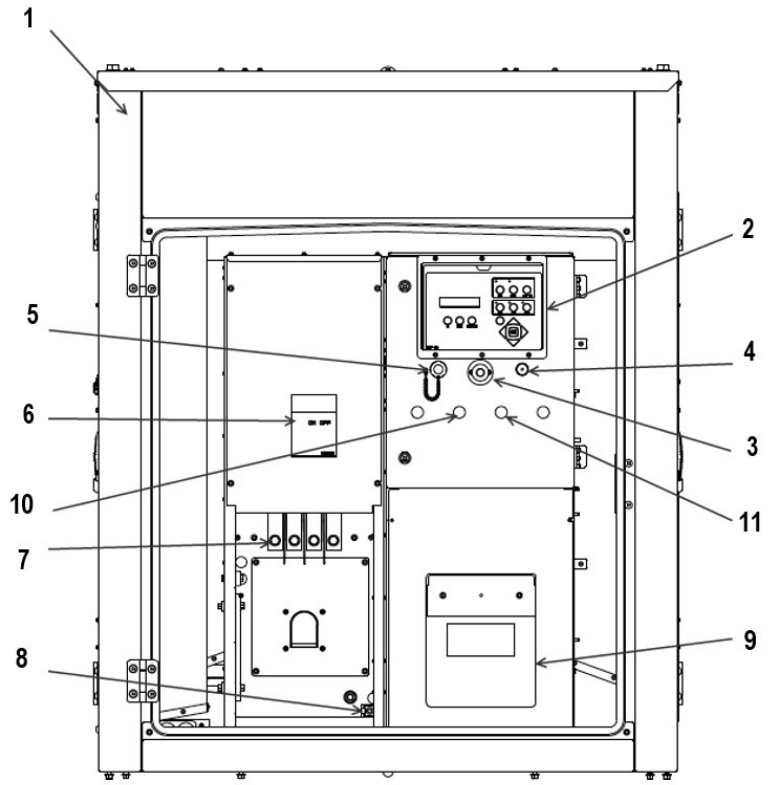
\*Busbar connection is standard. Distribution sockets are optional.

**Layout for General Dimensions**  
Dimensions in millimeters (inches)



## Control Panel and Power Distribution Layout

Item	Description
1	Steel enclosure with hinged, lockable door (not shown)
2	EMCP 4.2B digital genset controller
3	Emergency Stop button
4	Alarm
5	Service tool connector
6	Circuit breaker. 4-pole molded case, 630A
7	Main bus connection (bus bars with 14 mm holes)
8	Micro safety switch for bus bar door
9	Manual holder
10	Emission system failure lamp
11	Low DEF level lamp



### 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 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.

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