DIESEL GENERATOR SET





Image shown may not reflect actual package.

FEATURES

FUEL/EMISSIONS STRATEGY

• EPA Certified for Stationary Emergency Application (EPA Tier 3 emissions levels)

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER

• Fully prototype tested with certified torsional vibration analysis available

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 Cat[®] S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

STANDBY 100 ekW 125 kVA

PRIME 90 ekW 113 kVA 60 Hz 1800 rpm 480 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

Cat Model D100-6, Three Phase CAT[®] C4.4 DIESEL ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

GENERATOR SET

- Complete system designed and built at ISO 9001 certified facilities
- Factory tested to design specifications at full load conditions

CAT EMCP 4 CONTROL PANELS

- Simple user friendly interface and navigation
- Scalable system to meet a wide range ofcustomer needs
- Integrated Control System and Communications Gateway

SEISMIC CERTIFICATION

- Seismic Certification available
- 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
- Seismic Certification per Applicable Building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012 CBC 2007, CBC 2010
- Pre-approved by OSHPD and carries an OSP-0321-10 for use in healthcare projects in California

STANDBY 100 ekW 125 kVA PRIME 90 ekW 113 kVA 60 Hz 1800 rpm 480 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Dry replaceable paper element type with restriction indica- tor	
Cooling	 Radiator and cooling fan complete with protective guards Standard ambient temperatures up to 50°C (122°F) 	[] Radiator stone guard [] Radiator transition flange
Exhaust		[] Industrial [] Residential [] Critical mufflers [] Overhead silencer mounting kit
Fuel	Flexible fuel lines to base with NPT connections	[] Sub-base dual wall UL listed 24 hr fuel tank [] Sub-base dual wall UL listed 48 hr fuel tank [] Emergency vent 12 ft extension [] 5 gallon spill containment
Generator	 Class H insulation Drip proof generator air intake (NEMA 2,IP23) Electrical design in accordance with with BS5000 Part 99, EN61000-6, IEC60034-1, NEMA MG-1.33 IP23 Protection 	[] Generator upgrade 1 size [] Permanent magnet excitation [] Internal excitation [] Anti-condensation space heater
Power Termination	 Circuit breakers, UL/CSA listed, 3 pole (100% rated) Power center houses EMCP controller and control terminations (CB) Segregated low voltage wiring termination panel NEMA 1 steel enclosure, vibration isolated Electrical stub-up area directly below circuit breaker 	[]Auxiliary contacts []Shunt trip []Overload shutdown via breaker
Governor	• ADEM™A4	
Control Panels	 EMCP 4.2 digital control panel Vibration isolated NEMA 1 enclosure with lockable hinged door DC and AC Wiring harnesses 	[] NFPA110 upgrade [] Control panel chassis
Lube		[] Lube oil heater
Mounting	 Heavy-duty fabricated steel base with lifting points Anti-vibration pads to ensure vibration isolation Complete OSHA guarding Stub-up pipe ready for connection to silencer pipework 	[] IBC Seismic and OSHPD certification per Applicable Building Codes: IBC2000, IBC2003, IBC2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
Starting/Charging	 12 volt starting motor Batteries with rack and cables 	[] Battery charger – UL 10 amp [] Battery disconnect switch [] Battery removal (does not remove rack and cables) [] Coolant Heater
General	 High gloss polyurethane paint, CaterpillarYellow except rails and radiators gloss black Anticorrosive paint protection All electroplated hardware 	 [] CSA Certified [] Weather protective enclosure Industrial/Critical [] Sound attenuated protective enclosure [] Caterpillar tool set [] Caterpillar White paint

STANDBY 100 ekW 125 kVA PRIME 90 ekW 113 kVA



SPECIFICATIONS

STANDARD CAT GENERATOR			
Frame size	LC3014B		
Excitation	Self excitation		
Pitch	0.6667		
Number of poles	4		
Number of bearings	Single bearing		
Number of leads	12		
Insulation	Class H		
IP Rating	IP23		
Overspeed capability (%)	125		
Wave form deviation (%)	2		
Voltage regulator	Single phase sensing		
Voltage regulation	+/- 0.5% (steady state)		

Additional Voltage Information:

Three Phase	Prime	Standby	
208V Temp Rise	125°C / 225°F	150°C / 270°F	
240VTemp Rise	125°C / 225°F	150°C / 270°F	
480V Temp Rise	105°C / 189°F	130°C / 234°F	
600VTemp Rise	105°C / 189°F	130°C / 234°F	

- Consult your Cat dealer for other available voltages

CAT DIESEL ENGINE

C4.4 In-line 4, 4-cycle diesel		
Bore	105.0 mm (4,13 in)	
Stroke	127.0 mm (5.0 in)	
Displacement	4.4 L (268.5 in ³)	
Compression ratio	16.2:1	
Aspiration	Т	
Fuel system	Common rail	
Governor type	Electronic	
EMISSIONS (Nominal ¹)		
NOx + HC g/kWhr 3.73		
CO g/kWhr	1.15	
PM g/kWhr	0.21	

¹The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engne variations. Emissions data is based on 100% load.

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:

- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 12 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

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)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:

- Six digital inputs
- Four relay outputs (Form A)
- -Two relay outputs (Form C)
- -Two digital outputs
- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- Emergency stop pushbutton

Compatible with the following:

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



STANDBY 100 ekW 125 kVA PRIME 90 ekW 113 kVA

60 Hz 1800 rpm 480 Volts

TECHNICAL DATA

Open Generator Set – 1800 rpm/60 Hz/480 Volts	P3362A			
Tier 3	STANDBY		PRIME	
Generator Set Package Performance Genset power rating @ 0.8 pf Genset power rating with fan	125.0 kVA 100.0 ekW		112.5 kVA 90.0 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	29.8 L/hr 23.7 L/hr 17.5 L/hr	7.9 gal/hr 6.3 gal/hr 4.6 gal/hr	27.4 L/hr 21.9 L/hr 16.3 L/hr	7.2 gal/hr 5.8 gal/hr 4.3 gal/hr
Cooling System ¹ Air flow restriction (system) Engine coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity	0.12 kPa 17.0 L 7.0 L 10.0 L	0.48 in. water 4.5 Gal 1.8 Gal 2.6 Gal	0.12 kPa 17.0 L 7.0 L 10.0 L	0.48 in. water 4.5 Gal 1.8 Gal 2.6 Gal
Inlet Air Combustion air inlet flow rate	8.5 m³/min	300.2 cfm	8.4 m³/min	296.6 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system back pressure (maximum)	506°C 20.0 m³/min 63.5 mm 15.0 kPa	943°F 706.3cfm 2.5 in 60.2 in. water	480°C 19.2 m³/min 63.5 mm 15.0 kPa	896°F 678.0 cfm 2.5 in 60.2 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to aftercooler Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	61.0 kW 87.0 kW 18.0 kW 18.0 kW 9.7 kW	3469 Btu/min 4948 Btu/min 1024 Btu/min 1023.6 Btu/min 551.6 Btu/min	57.0 kW 81.0 kW 17.0 kW 15.0 kW 8.4 kW	3242 Btu/min 4606 Btu/min 967 Btu/min 853 Btu/min 477.7Btu/min
Alternator ² Motor starting capability @ 30% voltage dip Frame Rotor temperature rise	206 skV LC3014B 130°C	234°F	206 skV LC3014B 105°C	189°F
Lubrication System Total oil capacity Oil pan	8.0 L 7.0 L	2.1 gal 1.8 gal	8.0 L 7.0 L	2.1 gal 1.8 gal

¹For ambient and altitude capabilities consult your Cat dealer. Airflow restriction (system) is added to existing restriction from factory. ²Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.m



RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC.

Standby – Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime – Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand of 100% of prime-rated eKW with 10% of overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S. gal.) @ 15°C (59°F) and fuel inlet temperature 40°C (104°F). 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.

5



STANDBY 100 ekW 125 kVA PRIME 90 ekW 113 kVA

60 Hz 1800 rpm 480 Volts

DIMENSIONS

Package Dimensions		
Length	2362 mm	93 in
Width	1110 mm	44 in
Height	1304 mm	51 in

NOTE: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #4190059).

Performance No.: P3362A

Feature Code: NAC135P

Gen. Arr. Number: 3932540

Source: U.S. Sourced

LEHE0422-01 (04/13)

www.Cat-ElectricPower.com

2013 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, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

