DIESEL GENERATOR SET





Image shown may not reflect actual package.

STANDBY 60 ekW 75 kVA

PRIME 55 ekW 67 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.

FEATURES

FUEL/EMISSIONS STRATEGY

 EPA Certified for Stationary Emergency Application (Emits Equivalent U.S. EPA Tier 3 Nonroad Standards)

DESIGN CRITERIA

- The generator set meets NFPA 110, ISO 8528-5 transient response and can accept 100% rated load in one step
- Cooling system designed to operate in 50°C / 122°F ambient temperatures with an air flow restriction of 0.5 in. water

UL 2200 / CSA - Optional

- UL 2200 Listed
- CSA Certified

Certain restrictions may apply.

Consult with your Cat® Dealer.

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-product

Cat[®] Model D60-6, 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 of customer needs
- Integrated Control System and Communications Gateway
- Integrated Voltage Regulation

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



60 Hz 1800 rpm 480 Volts

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Dry replaceable paper element type with restriction indicator	
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 fuel tanks [] Emergency vent 12ft 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 (IE) / AREP [] Anti-condensation space heater
Power Termination	Circuit breakers, – 100% rated assembly, UL Listed 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 motorBatteries 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, Caterpillar Yellow except rails and radiators gloss black Anticorrosive paint protection All electroplated hardware	[] CSA Certified [] Weather protective enclosure [] Sound attenuated protective enclosures [] Caterpillar tool set [] Caterpillar White paint

60 Hz 1800 rpm 480 Volts



SPECIFICATIONS

STANDARD CAT GENERATOR		
Frame size	LC2014H	
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	Three phase sensing	
Voltage regulation	+/- 0.25% (steady state)	

Additional Voltage Information:

Three Phase	Prime	Standby	
208V Temp Rise	125°C / 225°F	130°C / 234°F	
240V Temp Rise	125°C / 225°F	130°C / 234°F	
480V Temp Rise	105°C / 189°F	105°C / 189°F	
600V Temp Rise	105°C / 189°F	105°C / 189°F	
Consult years Cot dealer for other coellette valteres			

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 in³)	
Compression ratio	16.2:1	
Aspiration	Turbocharged	
Fuel system	Common rail	
Governor type	Electronic	

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

LEHE0420-02 3

60 Hz 1800 rpm 480 Volts



TECHNICAL DATA

Open Generator Set – 1800 rpm/60 Hz/480 Volts	P3468A		P3468B	
EPA Certified for Stationary Emergency Application (Emits Equivalent U.S. EPA Tier 3 Nonroad Standards)	Standby		Prime	
Generator Set Package Performance Genset power rating @ 0.8 pf Genset power rating with fan	75.0 kVA 60.0 ekW		68.8 kVA 55.0 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	19.6 L/hr 17.0 L/hr 13.1 L/hr	5.2 gal/hr 4.5 gal/hr 3.5 gal/hr	18.9 L/hr 16.1 L/hr 12.4 L/hr	5.0 gal/hr 4.3 gal/hr 3.3 gal/hr
Cooling System¹ Air flow restriction (system) Engine coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity	0.12 kPa 16.5 L 9.5 L 7.0 L	0.48 in. water 4.4 gal 2.5 gal 1.8 gal	0.12 kPa 16.5 L 9.5 L 7.0 L	0.48 in. water 4.4 gal 2.5 gal 1.8 gal
Inlet Air Combustion air inlet flow rate	5.9 m³/min	208.4 cfm	5.9 m³/min	208.4 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system back pressure (maximum)	547.0°C 14.7 m³/min 63.5 mm 15 kPa	1017 °F 519 cfm 2.5 in 60.2 in. water	525.0°C 14.4 m³/min 63.5 mm 15 kPa	977 °F 509 cfm 2.5 in 60.2 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	49.6 kW 66.9 kW 14.9 kW 6.1 kW	2821 Btu/min 3805 Btu/min 847.3 Btu/min 346.9 Btu/min	46.7 kW 65.9 kW 10.8 kW 5.4 kW	2656 Btu/min 3742 Btu/min 614.2 Btu/min 307.1 Btu/min
Alternator ² Motor starting capability @ 30% voltage dip Frame Insulation class Temperature rise	163 skV LC2014HF H 105°C	189°F	163 skV LC2014HF 105°C	189°F
Lubrication System Total oil capacity Oil pan	8.4 L 6.9 L	2.2 gal 1.8 gal	8.4 L 6.9 L	2.2 gal 1.8 gal
Emissions (Nominal) ³ NOx + HC CO PM	4.33 g/kWhr 1.15 g/kWhr 0.18 g/kWhr			

¹For ambient and altitude capabilities consult your Cat dealer. Airflow restriction (system) is added to existing restriction from factory.

LEHE0420-02

²Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

³The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engne variations. Emissions data is based on 100% load.

60 Hz 1800 rpm 480 Volts



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.

LEHE0420-02 5





DIMENSIONS

Package Dimensions			
Length	1932 mm	76 in	
Width	1110 mm	44 in	
Height	1767 mm	46 in	

NOTE: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3989305).

Performance No.: P3468A/B

Feature Code: NAC133P

Gen. Arr. Number: 3932521

Source: U.S. Sourced

LEHE0420-02 (06/14)

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