DIESEL GENERATOR SET





Image shown may not reflect actual package.

CONTINUOUS 965 ekW 1206 kVA 50 Hz 1500 rpm 400 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

• Low Fuel consumption

DESIGN CRITERIA

 The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.

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

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

CAT® 3512 TA DIESEL ENGINE

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

CAT GENERATOR

- Matched to the performance and output characteristics of Cat engines
- · Industry leading mechanical and electrical design
- Industry leading motor starting capabilities
- High Efficiency

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

50 Hz 1500rpm 400 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Air cleaner	
Cooling	Package mounted radiator	
Exhaust	• Exhaust flange outlet	[] Exhaust mufflers (except Tier 4)
Fuel	 Primary fuel filter with integral water separator Secondary fuel filters Fuel priming pump 	
Generator	Matched to the performance and output characteristics of Cat engines Load adjustment module provides engine relief upon load impact and improves laod acceptance and recovery time IP23 protection	[] Oversize and premium generators [] Permanent magnet excitation (PMG) [] Internal excited (IE) [] Anti-condensation space heaters
Power Termination	• Bus bar	[] Circuit breakers, UL listed [] Circuit breakers, IEC compliant
Control Panel	• EMCP 4 Genset Controller	[] EMCP 4.2 [] EMCP 4.3 [] EMCP 4.4 [] Generator temperature monitoring and protection [] Load share module [] Digital I/O module [] Remote monitoring software
Mounting		[] Rubber vibration isolators
Starting/Charging		[] Battery chargers [] Oversize batteries [] Jacket water heater [] Heavy duty starting system [] Charging alternator [] Air starting motor with control and silencer (3500 & C175 models only)
General	Paint - Caterpillar Yellow except rails and radiators gloss black	The following options are based on regional and product configuration: [] Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007 [] EU Certificate of Conformance (CE) [] UL 2200 package [] CSA Certification [] EEC Declaration of Conformity [] Enclosures- sound attenuated, weather protective [] Automatic transfer switches (ATS) [] Integral & sub-base fuel tanks [] Integral & sub-base UL listed dual wall fuel tanks

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SPECIFICATIONS

CAT GENERATOR

Frame size
Pitch
Number of poles4
Number of bearings Single bearing
Number of Leads006
Insulation UL 1446 Recognized Class H with
tropicalization and antiabrasion - Consult your Caterpillar dealer for available voltages
IP RatingIP23
Alignment
Overspeed capability150
Wave form Deviation (Line to Line) 002.00
Voltage regulator 3 Phase sensing with selectible
volts/Hz Voltage regulationLess than +/- 1/2% (steady state) Less than +/- 1% (no load to full load)

CAT DIESEL ENGINE

3512 TA, V-12, 4-Stroke	Water-cooled	Diesel
Bore		. 170.00 mm (6.69 in)
Stroke		. 190.00 mm (7.48 in)
Displacement		.51.80 L (3161.03 in ³
Compression Ratio		13.5:1
Aspiration		TA
Fuel System		. Direct unit injection
Governor Type		Woodward

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:

- 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

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 (4.2 only)
- 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

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TECHNICAL DATA

965 ekW	
250.9 L/hr	66.3 Gal/hr
193.1 L/hr	51.0 Gal/hr
134.2 L/hr	35.5 Gal/hr
0.12 kPa	0.48 in. water
1246 m³/min	44002 cfm
286.8 L	75.8 gal
156.8 L	41.4 gal
130.0 L	34.3 gal
87.6 m³/min	3093.6 cfm
446.2 ° C	835.2 ° F
220.1 m³/min	7772.8 cfm
203.2 mm	8.0 in
6.7 kPa	26.9 in. water
581 kW	33041 Btu/min
958 kW	54481 Btu/min
140 kW	7962 Btu/min
113 kW	6426 Btu/min
45.5 kW	2587.6 Btu/min
3087 skVA	
1445	
105 ° C	189 ° F
310.4 L	82.0 gal
	193.1 L/hr 134.2 L/hr 0.12 kPa 1246 m³/min 286.8 L 156.8 L 130.0 L 87.6 m³/min 446.2 ° C 220.1 m³/min 203.2 mm 6.7 kPa 581 kW 958 kW 140 kW 113 kW 45.5 kW 3087 skVA 1445 105 ° C

¹ For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory. ² UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40°C ambient per NEMA MG1-32.

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RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards:

AS1359,CSAC22.2 No100-04, UL142,UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110,IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 72/23/EEC, 98/37/EC, 2004/108/EC

Continuous – Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power r rating. Typical peak demand is 100% of the continuous rated ekW for 100% of the operating hours.

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

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 Dealer for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat Dealer.

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DIMENSIONS

Package Dimensions				
Length	5249 mm	206.6 in		
Width	1975 mm	77.8 in		
Height	2367 mm	93.2 in		
Weight	11480 kg	25309 lbs		

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions.

Performance No.: DM8223

Feature Code: 512DE8V

Gen. Arr. Number: 2523790

Source: European Sourced

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