DIESEL GENERATOR SET



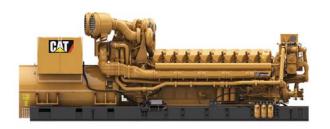


Image shown may not reflect actual package

CONTINUOUS 2600 ekW 3250 kVA 50 Hz 1500 rpm 11000 Volts

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

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

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 effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by products.

CAT C175-20 DIESEL ENGINE

- Reliable, rugged, durable design
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight

CAT SR5 GENERATOR

- Designed to match performance and output characteristics of Cat diesel engines
- Single point access to accessory connections

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 1500 rpm 11000 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Air cleaner, 4 x single element canister with service	[] Air cleaner, 4 x dual element with service
	indicator(s)	indicator(s)
0 "	Plug group for air inlet shut-off	[] Air inlet adapters
Cooling	SCAC cooling Ideal of worder and A.C. in let/outlet floorers	[] Remote horizontal SCAC radiator
	Jacket water and AC inlet/outlet flanges	[] Remote fuel cooler [] Low coolant level sensor (for remote radiators)
Exhaust	Dry exhaust manifold	[] Engine exhaust temperature module
LAHAGS	Bolted flange (ANSI 8" & DIN 200) with bellow for	[] Mufflers (15 dBA,25 dBA, or 40 dBA)
	each turbo (qty 4)	[] Dual 20" or single 24" vertical exhaust collector
		[] Weld flanges: ANSI 20" and ANSI 24"
Crankcase	Open crankcase ventilation	[] Crankcase explosion relief valve
Systems		
Fuel	Primary fuel filter with water separator	
	Secondary fuel filters (engine mounted)	
Generator	• 3 phase brushless, salient pole	[] Oversize generators
SR5	Space heater kit IEC platinum stator RTD's	[] Power connection arrangement
Governor	ADEM™ A4	[] Redundant shutdown
Governor		
Control	Shipp loose EMCP 4 control panel	[] EMCP 4.2
Panels		[] EMCP 4.3
		[] Local & remote annunciator modules
		[] Discrete I/O module
		[] Generator temperature monitoring & protection [] Remote monitoring
		[] Load share module
Lube	Lubricating oil	[] Load share module
	Oil filter, filler and dipstick	
	Oil drain line with valves	
	Fumes disposal	
	Gear type lube oil pump	
	Integral lube oil cooler	
Manust	Electric prelube pumps	I 10 min a trans line and it has transit at
Mounting	Rails-engine / generator Rubber anti-vibration mounts (shipped loose)	[] Spring type linear vibration isolators [] IBC vibration isolators
Starting /	• Dual 24 volt electric starting motors	[] Oversized battery set
Charging	Batteries with rack and cables	[] Oversized battery set [] 75 amp charging alternator
Jilaigilig	Battery disconnect switch	[] Battery chargers (20,35 or 50 Amp)
	,,	[] Jacket water heater
		[] Redundant Electric Starter
General	RH service (Except LH Service Oil Filter)	[] Barring group- manual or air powered
	Paint - Caterpillar Yellow with high gloss black rails	[] Factory test reports
	SAE standard rotation	
	Flywheel and flywheel housing - SAE No. 00	

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SPECIFICATIONS

CAT GENERATOR

3055
PM
0.6667
4
2
6
Class H
Drip proof IP23
of rated125%
3 %
3 phase sensing with
selectable V/Hz regulation

CAT DIESEL ENGINE

C175-20 SCAC, V-20, 4 stroke, water-cooled diesel

Bore	
Stroke	220.00 mm (8.66in)
Displacement	105.8 L (6456.31 in ³)
Compression ratio	15.3:1
Aspiration	TA
Fuel system	Common Rail
Governor Type	ADEM™ A4

CAT EMCP 4 CONTROL PANELS

EMCP 4 controls including:

- Run / Auto / Stop Control
- Speed Adjust
- Voltage Adjust
- Engine Cycle Crank
- Emergency stop pushbutton

EMCP 4.2 controller features:

- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions
- True RMS AC metering, 3-phase, ±1% accuracy.

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)
- Power Factor (per phase & average)
- kW (per phase, average & percent)
- kVA (per phase, average & percent)
- kVAr (per phase, average & percent)
- kW-hr (total)
- kVAr-hr (total)

Warning/shutdown with common LED indication of shutdowns for:

- 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

- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- 6 programmable digital inputs
- 6 programmable relay outputs (Form A)
- 2 programmable relay outputs (Form C)
- 2 programmable digital outputs

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Technical Data

Open Generator Set - 1500 rpm/50 Hz/11 000 Volts	DM8	DM8942-01	
Low Fuel Consumption			
Generator Set Package Performance			
Genset Power rating @ 0.8 pf	3250 kVA		
Genset Power Rating without fan	2600 ekW		
Fuel Consumption			
100% Load with fan	639.6 L/hr	169.0 Gal/hr	
75% Load with fan	486.3 L/hr	128.5 Gal/hr	
50% Load with fan	342.9 L/hr	90.6 Gal/hr	
Inlet Air			
Combustion air inlet flow rate	232.5 m ³ /min	8210 cfm	
Exhaust System			
Exhaust stack gas temperature (engine out)	410.6 °C	771 °F	
Exhaust gas flow rate	541.3 m³/min	19113 cfm	
Exhaust system backpressure (maximum allowable)	6.7 kPA	26.9 in water	
Heat Rejection			
Heat rejection to coolant	1250 kW	71074 Btu/min	
Heat rejection to exhaust (total)	2293 kW	130394 Btu/min	
Heat rejection to aftercooler	258 kW	14669 Btu/min	
Heat rejection to atmosphere from engine	172 kW	9795 Btu/min	
Heat rejection to atmosphere from generator	148 kW	8424 Btu/min	
Alternator			
Motor starting capabiliy @30% voltage dip	10130 skVA		
Frame	3055		
Temperature Rise	105 °C	189 °F	
Lube System			
Sump refill with filter	675 L	178.3 gal	
Emissions (Nominal) ²			
NOx mg/nm³	4296.6 mg/nm³		
CO mg/nm ³	66.7 mg/nm³		
HC mg/nm ³	26.6 mg/nm³		
PM mg/nm³	14.6 mg/nm³		

Note: This generator set is not offered with an engine driven radiator. Addition of an engine driven fan will reduce the output below the nameplate rating.

¹ Some packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40 degree C ambient per NEMA M G1-32.

² Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1for measuring HC, CO, PM, NOx.

Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle. Emissions values are tailpipe out with aftertreatment installed. Values shown as zero may be greater than zero but were below the detection level of the equipment used at the tie of measurement.

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

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DIMENSIONS

Package Dimensions					
Length	6642 mm	261.5 in			
Width	2243 mm	88.3 in			
Height	2225 mm	87.6 in			
Weight	23400 kg	51588 lbs			

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

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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Feature Code: 175DR1L

Gen. Arr. Number: 331-3052

Sourced: U.S. Sourced LEHE0610-00 (06/14)