



Image shown may not
reflect actual package.

STANDBY

484 ekW 605 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

EU Stage II Emissions Compliant
Suitable for Mobile Applications
in the European Community

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 1,600 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® C18 ATAAC DIESEL ENGINE

- Utilizes ACERT™ Technology
- 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
- Electronic controlled governor

CAT GENERATOR

- Matched to the performance and output characteristics of Cat engines
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- UL 1446 Recognized Class H insulation

CAT EMCP 3 SERIES CONTROL PANELS

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

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Light Duty Air Cleaner • Service indicator	☐ Single element canister type air cleaner ☐ Dual element air cleaner ☐ Heavy-duty air cleaner with precleaner ☐ Air inlet shutoff
Cooling	• Radiator with guard sized for 50° C • Coolant level sight window • Coolant drain line with valve • Fan and belt guards • Caterpillar® Extended Life Coolant	☐ Radiator duct flange ☐ Low Coolant Level Sensor ☐ Radiator removal
Exhaust	• Stainless steel exhaust flex and ANSI weld flange • Turbo outlet elbow	☐ Industrial, residential and critical mufflers ☐ 35 dBA muffler ☐ Engine mounted muffler ☐ Mounting and through-wall installation kits ☐ Manifold and turbocharger guards
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • Fuel cooler • Fuel priming pump • Fuel pressure gauge • Flexible fuel lines	☐ Dual Wall Integral Fuel Tanks ☐ Dual Wall Sub-base Fuel Tanks ☐ Manual Fuel Fill Pump ☐ Automatic Fuel Fill Options
Generator	• Class H insulation • Class H Temperature Rise • R448 Voltage Regulator with Load Adjustment Module • Power center power terminal strip connections • Segregated low voltage wiring panel • IP23 Protection	☐ Oversize and premium generators ☐ Three phase sensing ☐ Quadrature droop kit ☐ Space heaters ☐ RFI filter ☐ Circuit breaker, IEC compliant 3 or 4-pole (100% rated) ☐ Floor standing circuit breakers with auxiliary contacts & cabling kits
Governor	• ADEM™ A4	☐ Load Share Module
Control Panels	• EMCP 3.1 (package mounted)	☐ EMCP 3.2 ☐ EMCP 3.3 ☐ Local alarm and remote annunciator modules ☐ Protective devices
Lube	• Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Lube oil level indicator	☐ Oil temperature sensor ☐ Manual sump pump
Mounting	• Formed steel narrow base frame • Linear vibration isolators between base and engine generator	☐ Formed steel wide base frame ☐ Oil field skid base
Starting/Charging	• 45 amp charging alternator • 24 volt starting motor(s) • Batteries with rack and cables	☐ Jacket water heater ☐ Block heater ☐ Ether starting aid ☐ Battery disconnect switch ☐ Battery charger(5A, 10A) ☐ Oversized batteries ☐ Battery removal

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SPECIFICATIONS

CAT GENERATOR

Frame size..... LC6114G
Excitation..... Self Excited
Pitch..... 0.6667
Number of poles..... 4
Number of leads..... 12
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP rating..... Drip Proof IP23
Alignment..... Pilot Shaft
Overspeed capability..... 125% of rated
Wave form deviation (Line to Line)..... 2%
Paralleling kit droop transformer..... Standard
Voltage Regulator..... Single phase sensing with load adjustable module
Voltage Regulation..... Less than +/- 1/2% (steady state)
Less than +/- 1/2% (w/ 3% speed change)
Telephone Influence Factor..... Less than 50
Harmonic distortion..... Less than 5%

CAT ENGINE

C18 ATAAC, I-6, 4-stroke watercooled diesel
Bore - mm..... 145.00 mm (5.71 in)
Stroke - mm..... 183.00 mm (7.2 in)
Displacement - L..... 18.13 L (1106.36 in³)
Compression ratio..... 14.5:1
Aspiration..... Air-to-Air Aftercooled
Fuel system..... Electronic unit injection
Governor type..... Caterpillar ADEM control system

CAT EMCP 3 SERIES CONTROLS

- EMCP 3.1 (Standard)
- EMCP 3.2 / EMCP 3.3 (Option)
- Single location customer connector point
- True RMS metering, 3-phase
- Controls
 - Run / Auto / Stop control
 - Speed Adjust
 - Voltage Adjust
 - Emergency Stop Pushbutton
 - Engine cycle crank
- Digital Indication for:
 - RPM
 - Operating hours
 - Oil Pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, phase amps, Hz
 - ekW, kVA, kVAR, kW-hr, %kW, PF (EMCP 3.2 / 3.3)
- Shutdowns with common indicating light for:
 - Low oil pressure
 - High coolant temperature
 - Low coolant level
 - Overspeed
 - Emergency stop
 - Failure to start (overcrank)
- Programmable protective relaying functions: (EMCP 3.2 & 3.3)
 - Under and over voltage
 - Under and over frequency
 - Overcurrent (time and inverse time)
 - Reverse power (EMCP 3.3)
- MODBUS isolated data link, RS-485 half-duplex (EMCP 3.2 & 3.3)
- Options
 - Vandal door
 - Local annunciator module
 - Remote annunciator module
 - Input / Output module
 - RTD / Thermocouple Modules
 - Monitoring software

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TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM9628	
EU Stage II		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	605 kVA 484 ekW	
Coolant to aftercooler Coolant to aftercooler temp max	49 ° C	120 ° F
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	134.1 L/hr 97.1 L/hr 66.2 L/hr	35.4 Gal/hr 25.7 Gal/hr 17.5 Gal/hr
Cooling System¹ Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine Coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity	0.12 kPa 645 m³/min 81.8 L 20.8 L 61.0 L	0.48 in. water 22778 cfm 21.6 gal 5.5 gal 16.1 gal
Inlet Air Combustion air inlet flow rate	37.5 m³/min	1324.3 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	549.9 ° C 109.5 m³/min 203 mm 10.0 kPa	1021.8 ° F 3867.0 cfm 8 in 40.2 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	162 kW 502 kW 107 kW 135 kW 30.3 kW	9213 Btu/min 28549 Btu/min 6085 Btu/min 7677 Btu/min 1723.2 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1227 skVA LC6114G 163 ° C	293 ° F
Lube System Sump refill with filter	38.0 L	10.0 gal
Emissions (Nominal)³ NOx mg/nm³ CO mg/nm³ HC mg/nm³ PM mg/nm³	1864.3 mg/nm³ 504.6 mg/nm³ 11.2 mg/nm³ 26.5 mg/nm³	

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

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

³ Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for 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.

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RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, UL508A, 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. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046. Standby ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature just below the shutdown temperature.

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 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	3833.5 mm	150.92 in
Width	1536.0 mm	60.47 in
Height	2136.0 mm	84.09 in
Weight	4853 kg	10,699 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3077557).

Performance No.: DM9628

Feature Code: C18DE1U

Gen. Arr. Number: 2476121

Source: European Sourced

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