



Image shown may not reflect actual package.

STANDBY

880 kW 1100 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 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

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar 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 C32 ATAAC DIESEL ENGINE

- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Four-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR

- Designed to match the performance and output characteristics of Caterpillar diesel engines
- Single point access to accessory connections
- 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 | <ul style="list-style-type: none"> • Single element canister type air cleaner • Service indicator | <ul style="list-style-type: none"> • Dual element air cleaners • Air inlet adapters |
| Cooling | <ul style="list-style-type: none"> • Radiator with guard (43°C) • Low profile (frontal area) • Low airflow • Coolant drain line with valve • Fan and belt guards • Caterpillar Extended Life Coolant • Coolant level sensors • Radiator duct flange | <ul style="list-style-type: none"> • Radiator with 27°C ambient capability • Jacket water heater |
| Exhaust | <ul style="list-style-type: none"> • Dry exhaust manifold • Flanged faced outlets | <ul style="list-style-type: none"> • Stainless steel exhaust flex fittings • Elbows, flanges, expanders & Y adapters |
| Fuel | <ul style="list-style-type: none"> • Primary fuel filter with water separator • Secondary fuel filter • Fuel priming pump • Flexible fuel lines • Fuel cooler | |
| Generators | <ul style="list-style-type: none"> • Class H insulation • Class F temperature (105°C prime/130°C standby) • Winding temperature detectors (select models) • Anti-condensation space heaters | <ul style="list-style-type: none"> • Oversize & premium generators |
| Power Termination | <ul style="list-style-type: none"> • Bus bar (NEMA and IEC mechanical lug holes) -right side standard • Bottom cable entry | <ul style="list-style-type: none"> • Circuit breakers, UL listed, 3 pole with shunt trip, 100% rated, choice of trip units, manual or electrically operated (low voltage only) • Circuit breakers, IEC compliant, 3 or 4 pole with shunt trip (low voltage only), choice of trip units, manual or electrically operated • Shroud cover for bottom cable entry • Power terminations can be located on the left and/or rear as an option. Also, multiple circuit breakers can be ordered (up to 2) • Top cable entry |
| Governor | <ul style="list-style-type: none"> • ADEM™ A4 | <ul style="list-style-type: none"> • Load Share Module |
| Control Panels | <ul style="list-style-type: none"> • EMCP 3.1 • User Interface panel (UIP) - rear mount • Emergency Stop Push button | <ul style="list-style-type: none"> • EMCP 3.2 and EMCP 3.3 • Right or left mount UIP • Local & remote annunciator modules • Discrete I/O Module • Generator temperature monitoring & protection • Load share module |
| Lube | <ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Gear type lube oil pump | <ul style="list-style-type: none"> • Deep sump oil pan |
| Mounting | <ul style="list-style-type: none"> • Formed steel welded base • Anti-vibration mounts (shipped loose) | |
| Starting/Charging | <ul style="list-style-type: none"> • 24 volt starting motor(s) • Batteries with rack and cables • Battery disconnect | <ul style="list-style-type: none"> • Battery chargers (10 Amp) • 45 amp charging alternator • Oversize batteries • Ether starting aid |
| General | <ul style="list-style-type: none"> • Right-hand service • Paint - Caterpillar Yellow (except rails and radiators that are gloss black) • SAE standard rotation • Flywheel and Flywheel housing - SAE No. 0 | <ul style="list-style-type: none"> • UL 2200 • CSA certification • EU Declaration of Incorporation • EEC Declaration of Conformity |

SPECIFICATIONS

CAT GENERATOR

SR4B Generator

| | |
|--|--|
| Frame size..... | 693 |
| Excitation..... | Permanent Magnet |
| Pitch..... | 0.7222 |
| Number of poles..... | 4 |
| Number of bearings..... | 2 |
| Number of Leads..... | 12 |
| Insulation..... | UL 1446 Recognized Class H with tropicalization and antiabrasion |
| IP rating..... | Drip Proof IP22 |
| Alignment..... | Close Coupled |
| Overspeed capability - % of rated..... | 180 |
| Wave form..... | 003.00 |
| Voltage regulator..... | 3 Phase sensing with selectable volts/Hz |
| Voltage regulation..... | Less than +/- 1/2% (steady state) |
| | Less than +/- 1% (no load to full load) |
| Telephone Influence Factor..... | Less than 50 |
| Harmonic distortion..... | Less than 5% |

CAT DIESEL ENGINE

C32 TA, V-12, 4-stroke watercooled diesel

| | |
|------------------------|------------------------------------|
| Bore - mm..... | 145.00 mm (5.71 in) |
| Stroke - mm..... | 162.00 mm (6.38 in) |
| Displacement - L..... | 32.10 L (1958.86 in ³) |
| Compression ratio..... | 15:1 |
| Aspiration..... | TA |
| Fuel system..... | MEUI |
| Governor type..... | ADEM™ A4 |

CAT EMCP 3 SERIES CONTROLS

- 12-24 Volt (nominal) DC Control
- Run/Auto/Stop control
- Display Size 24 x 95 mm
- Display Size 33 x 132 (pixels)
- Display available in any of 26 languages with text translation capability
- Temperature operating range -40C to 70C (display to -20C)
- Designed for mounting on generator set package (vibration tested to 4.3G sinusoidal and 15G shock)
- 3-phase, true RMS metering
- Generator metering accuracy (+/- 2%)
- Metering - L-L volts, L-N volts, phase Amps, Hz
- Digital indications for RPM, operating hours, oil pressure, coolant temperature and system DC voltage
- LED indicators for warning/shutdown alarms (low oil pressure, high coolant temperature, low coolant, over-speed, etc)
- Reset all events function
- Voltage adjust when CDVR is on J1939 data-link
- Integrates with Adem engine governor for engine monitoring, alarms and control
- Integrates with Caterpillar Digital Regulator (CDVR) for alarms and control
- Compatible with Caterpillar ET service tool for enhanced serviceability including data capturing from event log, data logging, set point programming and troubleshooting
- Field re-flashable software ensures the customers get the latest updated software
- Programmable switch inputs
- Programmable relay outputs (2A continuous DC)

TECHNICAL DATA

| Open Generator Set - - 1500 rpm/50 Hz/400 Volts | DM8146 | |
|--|---|---|
| Low Fuel Consumption | | |
| Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan | 1100 kVA 880 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 | 235.3 L/hr 178.8 L/hr 126.3 L/hr | 62.2 Gal/hr 47.2 Gal/hr 33.4 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 1039 m ³ /min 190.0 L 55.0 L 135.0 L | 0.48 in. water 36692 cfm 50.2 gal 14.5 gal 35.7 gal |
| Inlet Air Combustion air inlet flow rate | 61.2 m ³ /min | 2161.3 cfm |
| Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable) | 567.3 ° C 182.9 m ³ /min 203 mm 10.0 kPa | 1053.1 ° F 6459.1 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 | 355 kW 859 kW 151 kW 190 kW 47.3 kW | 20189 Btu/min 48851 Btu/min 8587 Btu/min 10805 Btu/min 2689.9 Btu/min |
| Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise | 1982 skVA 693 130 ° C | 234 ° F |
| Lube System Sump refill with filter | 68.0 L | 18.0 gal |
| Emissions (Nominal)³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³ | 2820.1 mg/nm ³ 278.0 mg/nm ³ 3.8 mg/nm ³ 7.1 mg/nm ³ | |

¹ For ambient and altitude capabilities consult your Caterpillar 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.

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, ISO 3046, ISO 8528, NEMA MG 1-33, UL508A, 98/37/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 ISO 8528. Fuel stop power in accordance with ISO 3046. 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 ISO 3046 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 Caterpillar dealer.

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DIMENSIONS

| Package Dimensions | | |
|--------------------|-----------|-----------|
| Length | 4666.9 mm | 183.74 in |
| Width | 2044.4 mm | 80.49 in |
| Height | 2202.2 mm | 86.7 in |
| Weight | 8256 kg | 18,201 lb |

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #2763027).

Performance No.: DM8146

Feature Code: C32DE03

Gen. Arr. Number: 2628094

Source: U.S. Sourced

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