

Cat® 3512

Diesel Generator Sets



Image shown may not reflect actual configuration

| | |
|-------------------------------------|----------------|
| Bore – mm (in) | 170 (6.69) |
| Stroke – mm (in) | 190 (7.48) |
| Displacement – L (in ³) | 51.8 (3161.03) |
| Compression Ratio | 13.5:1 |
| Aspiration | TA |
| Fuel System | MUI |
| Governor Type | Woodward |

| Prime-DCP 60 Hz kW (kVA) | Emissions Performance |
|-----------------------------|------------------------------------|
| 1000 (1250) | Optimized for Low Fuel Consumption |
| 1135 (1419) | Optimized for Low Fuel Consumption |

Features

Cat® Diesel Engine

- Designed and optimized for low fuel consumption
- Reliable performance proven in thousands of applications worldwide

Generator Set Package

- Accepts 100% block load in one step and meets NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators

- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System

- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels

- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty

- 12 months/unlimited hour warranty for prime-DCP ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support

- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing

- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Standard and Optional Equipment

Engine

Air Cleaner

- Single element
- Dual element
- Heavy duty

Muffler

- Industrial grade (15 dB)

Starting

- Standard batteries
- Oversized batteries
- Standard electric starter(s)
- Dual electric starter(s)
- Air starter(s)
- Jacket water heater

Alternator

Output voltage

- 380V 6300V
- 416V 6600V
- 440V 6900V
- 480V 12470V
- 600V 13200V
- 4160V 13800V

Temperature Rise (over 40°C ambient)

- 150°C
- 125°C/130°C
- 105°C
- 80°C

Winding type

- Random wound
- Form wound

Excitation

- Internal excitation (IE)
- Permanent magnet (PM)

Attachments

- Anti-condensation heater
- Stator and bearing temperature monitoring and protection

Power Termination

Type

- Bus bar
- Circuit breaker
- 1600A 2000A
- 2500A 3000A
- 3200A
- UL IEC
- 3-pole 4-pole
- Manually operated
- Electrically operated

Trip Unit

- LSI LSI-G
- LSIG-P

Control System

Controller

- EMCP 4.2B

Attachments

- Local annunciator module
- Remote annunciator module
- Expansion I/O module
- Remote monitoring software

Charging

- Battery charger – 10A
- Battery charger – 20A
- Battery charger – 35A

Vibration Isolators

- Rubber
- Spring
- Seismic rated

Cat Connect

Connectivity

- Ethernet
- Cellular

Extended Service Options

Terms

- 2 year (prime)
- 3 year
- 5 year
- 10 year

Coverage

- Silver
- Gold
- Platinum
- Platinum Plus

Ancillary Equipment

- Automatic transfer switch (ATS)
- Paralleling switchgear
- Paralleling controls

Certifications

- UL 2200 Listed
- CSA
- IBC seismic certification
- OSHPD pre-approval

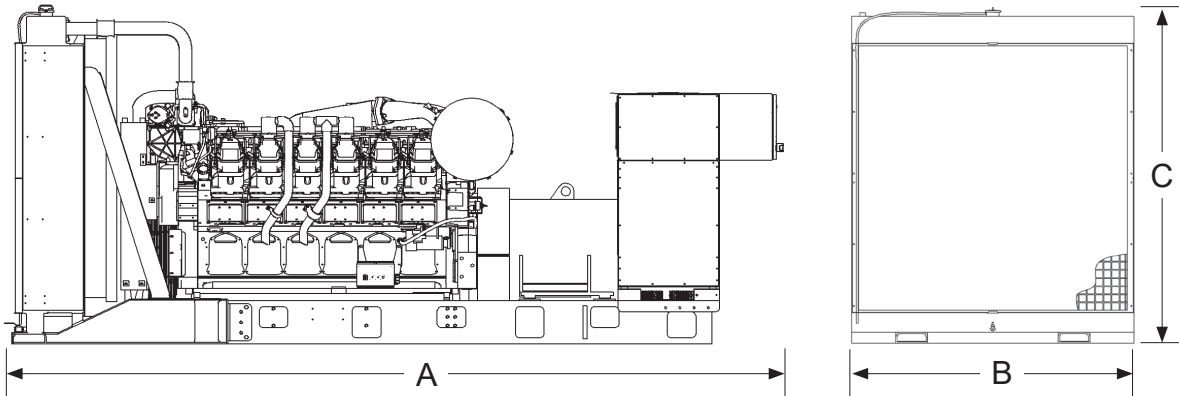
Note: Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.

Package Performance

| Performance | Prime-DCP | | Prime-DCP | |
|---|------------------|----------|------------------|-----------|
| Frequency | 60 Hz | | 60 Hz | |
| Gen set power rating with fan | 1000 ekW | | 1135 ekW | |
| Gen set power rating with fan @ 0.8 power factor | 1250 kVA | | 1419 kVA | |
| Emissions | Low Fuel | | Low Fuel | |
| Performance number | EM5996-00 | | EM5997-00 | |
| Fuel Consumption | | | | |
| 100% load with fan – L/hr (gal/hr) | 262.9 | (69.5) | 311.1 | (82.2) |
| 75% load with fan – L/hr (gal/hr) | 203.5 | (53.8) | 231.8 | (61.2) |
| 50% load with fan – L/hr (gal/hr) | 146.4 | (38.6) | 166.5 | (43.9) |
| 25% load with fan – L/hr (gal/hr) | 90.6 | (23.9) | 102.3 | (27.1) |
| Cooling System | | | | |
| Radiator air flow restriction (system) – kPa (in. water) | 0.12 | (0.48) | 0.12 | (0.48) |
| Radiator air flow – m ³ /min (cfm) | 1133 | (40011) | 1614 | (56997) |
| Engine coolant capacity – L (gal) | 156.8 | (41.4) | 156.8 | (41.4) |
| Radiator coolant capacity – L (gal) | 130.0 | (34.0) | 130.0 | (34.0) |
| Total coolant capacity – L (gal) | 286.8 | (75.4) | 286.8 | (75.4) |
| Inlet Air | | | | |
| Combustion air inlet flow rate – m ³ /min (cfm) | 93.2 | (3291.0) | 104.7 | (3697.0) |
| Exhaust System | | | | |
| Exhaust stack gas temperature – °C (°F) | 457.5 | (855.5) | 507.7 | (945.9) |
| Exhaust gas flow rate – m ³ /min (cfm) | 238.1 | (8407.6) | 283.3 | (10003.4) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7 | (27.0) | 6.7 | (27.0) |
| Heat Rejection | | | | |
| Heat rejection to jacket water – kW (Btu/min) | 647 | (36795) | 763 | (43389) |
| Heat rejection to exhaust (total) – kW (Btu/min) | 1038 | (59031) | 1275 | (72506) |
| Heat rejection to aftercooler – kW (Btu/min) | 139 | (7905) | 192 | (10919) |
| Heat rejection to atmosphere from engine – kW (Btu/min) | 118 | (6711) | 123 | (6995) |
| Heat rejection from alternator – kW (Btu/min) | 55 | (3131) | 57 | (3244) |
| Emissions* (Nominal) | | | | |
| NOx mg/Nm ³ (g/hp-h) | 4744.9 | (9.39) | 5028.4 | (9.81) |
| CO mg/Nm ³ (g/hp-h) | 469.4 | (0.93) | 581.6 | (1.13) |
| HC mg/Nm ³ (g/hp-h) | 140.4 | (0.28) | 95.1 | (0.19) |
| PM mg/Nm ³ (g/hp-h) | 71.9 | (0.14) | 88.7 | (0.17) |
| Emissions* (Potential Site Variation) | | | | |
| NOx mg/Nm ³ (g/hp-h) | 5693.9 | (11.27) | 6034.1 | (11.77) |
| CO mg/Nm ³ (g/hp-h) | 844.9 | (1.67) | 1046.9 | (2.04) |
| HC mg/Nm ³ (g/hp-h) | 186.7 | (0.37) | 126.5 | (0.25) |
| PM mg/Nm ³ (g/hp-h) | 100.7 | (0.20) | 124.2 | (0.24) |

*mg/Nm³ levels are corrected to 5% O₂. Contact your local Cat dealer for further information.

Weights and Dimensions



| Prime-DCP 60 Hz ekW (kVA) | Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|---------------------------------|--------------------|--------------------|--------------------|-----------------------|
| 1000 (1250) | 5456 (214.8) | 1975 (77.8) | 2367 (93.2) | 10 080 (22,210) |
| 1135 (1419) | 5556 (218.8) | 1975 (77.8) | 2367 (93.2) | 10 270 (22,650) |

Note: For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.

Ratings Definitions

Prime-DCP

For data center applications only. Prime-DCP power output available with varying load for unlimited time. Average power output is not to exceed 100% of prime-DCP rated ekW. Typical peak demand is 100% of the prime-DCP rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Applicable Codes and Standards

AS 1359, CSA C22.2 No. 100-04, UL 142, UL 489, UL 869, UL 2200, IBC, IEC 60034-1, ISO 3046, ISO 8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU and facilitates compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications

- ISO 8528-1 Data Center Power (DCP) compliant per Cat diesel generator set prime-DCP power rating.
- All ratings Tier III/Tier IV compliant per Uptime Institute requirements.
- All ratings ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates

Fuel consumption reported in accordance with ISO 3046-1, 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 15°C (59°F) and weighing 850 g/liter (7.0936 lbs/U.S. gal.) All fuel consumption values refer to rated engine power.

www.cat.com/electricpower

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