Cat® C32
Diesel Generator Sets

Image shown may not reflect actual configuration

<table>
<thead>
<tr>
<th>Standby 50 Hz kVA (e kW)</th>
<th>Mission Critical 50 Hz kVA (e kW)</th>
<th>Prime 50 Hz kVA (e kW)</th>
<th>Emissions Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1400 (1120)</td>
<td>1400 (1120)</td>
<td>1275 (1020)</td>
<td>Optimized for Low Fuel Consumption</td>
</tr>
<tr>
<td>1500 (1200)</td>
<td>1500 (1200)</td>
<td>1375 (1100)</td>
<td></td>
</tr>
</tbody>
</table>

Standard Features

Cat® Diesel Engine
- Designed and optimized for low fuel consumption
- Reliable and consistent 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 is verified through prototype testing, which includes torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators
- Superior motor starting capability minimizes the need for oversizing the generator
- Designed to match the 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
- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous 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

<table>
<thead>
<tr>
<th>Bore – mm (in)</th>
<th>145 (5.7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke – mm (in)</td>
<td>162 (6.4)</td>
</tr>
<tr>
<td>Displacement – L (in³)</td>
<td>32.1 (1959)</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>14.0:1</td>
</tr>
<tr>
<td>Aspiration</td>
<td>TA</td>
</tr>
<tr>
<td>Fuel System</td>
<td>EUI</td>
</tr>
<tr>
<td>Governor Type</td>
<td>ADEM™ A4</td>
</tr>
</tbody>
</table>
## Optional Equipment

### Engine
- **Air Cleaner**
  - Single element
  - Dual element
  - Heavy duty
- **Muffler**
  - Industrial grade (15 dB)
- **Starting**
  - Standard batteries
  - Oversized batteries
  - Standard electric starter
  - Dual electric starter
  - Jacket water heater

### Alternator
- **Output voltage**
  - 400V
  - 415V
- **Temperature Rise (over 40°C ambient)**
  - 150°C
  - 125°C/130°C
  - 105°C
  - 80°C
- **Winding type**
  - Random wound
  - Form wound
- **Excitation**
  - Self excited
  - Internal excitation (IE)
  - Permanent magnet (PM)
- **Attachments**
  - Anti-condensation heater
  - Stator and bearing temperature monitoring and protection

### Power Termination
- **Type**
  - Bus bar
  - Circuit breaker
  - 400A
  - 1200A
  - 2000A
  - 3000A
  - UL
  - 3-pole
  - 4-pole
  - Manually operated
  - Electrically operated
- **Trip Unit**
  - LSI
  - LSIG-P

### Factory Enclosure
- **Weather protective**
- **Sound attenuated**

### Attachments
- Cold weather bundle
- DC lighting package
- AC lighting package
- Motorized louvers

### Fuel Tank
- Sub-base
- 1000 gal (3875 L)
- 2000 gal (7570 L)
- 3600 gal (13627 L)

### Control System
- **Controller**
  - EMCP 4.2B
  - EMCP 4.3
  - EMCP 4.4
- **Attachments**
  - Local annunciator module
  - Remote annunciator module
  - Expansion I/O module
  - Remote monitoring software

### Charging
- Battery charger – 10A

### Vibration Isolators
- Rubber
- Spring
- Seismic rated

### Cat Connect
- **Connectivity**
  - Ethernet
  - Cellular
  - Satellite

### 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)
- Uninterruptible power supply (UPS)
- Paralleling switchgear
- Paralleling controls

### Certifications
- IBC seismic certification
- EU Declaration of Conformity
- Eurasian Conformity (EAC)

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**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

<table>
<thead>
<tr>
<th>Performance</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>50 Hz</td>
<td>50 Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Genset power rating with fan</td>
<td>1200 ekW</td>
<td>1200 ekW</td>
<td>1100 ekW</td>
</tr>
<tr>
<td>Genset power rating with fan @ 0.8 power factor</td>
<td>1500 kVA</td>
<td>1500 kVA</td>
<td>1375 kVA</td>
</tr>
<tr>
<td>Fueling strategy</td>
<td>Low Fuel</td>
<td>Low Fuel</td>
<td>Low Fuel</td>
</tr>
<tr>
<td>Performance number</td>
<td>EM2320-03</td>
<td>EM2528-01</td>
<td>EM2534-01</td>
</tr>
</tbody>
</table>

### Fuel Consumption

- **100% load with fan – L/hr (gal/hr)**
  - 314.7 (83.1) L/hr (gal/hr)
  - 314.7 (83.1) L/hr (gal/hr)
  - 286.9 (75.8) L/hr (gal/hr)
- **75% load with fan – L/hr (gal/hr)**
  - 232.8 (61.5) L/hr (gal/hr)
  - 232.8 (61.5) L/hr (gal/hr)
  - 213.6 (56.4) L/hr (gal/hr)
- **50% load with fan – L/hr (gal/hr)**
  - 158.5 (41.9) L/hr (gal/hr)
  - 158.5 (41.9) L/hr (gal/hr)
  - 147.0 (38.8) L/hr (gal/hr)
- **25% load with fan – L/hr (gal/hr)**
  - 92.3 (24.4) L/hr (gal/hr)
  - 92.3 (24.4) L/hr (gal/hr)
  - 86.6 (22.9) L/hr (gal/hr)

### Cooling System

- **Radiator air flow restriction (system) – kPa (in. water)**
  - 0.12 (0.48) kPa (in. water)
  - 0.12 (0.48) kPa (in. water)
  - 0.12 (0.48) kPa (in. water)
- **Radiator air flow – m³/min (cfm)**
  - 1355 (47851) m³/min (cfm)
  - 1355 (47851) m³/min (cfm)
  - 1355 (47851) m³/min (cfm)
- **Engine coolant capacity – L (gal)**
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)
- **Radiator coolant capacity – L (gal)**
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)
- **Total coolant capacity – L (gal)**
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)
  - 110.0 (29.0) L (gal)

### Inlet Air

- **Combustion air inlet flow rate – m³/min (cfm)**
  - 100.6 (3551.3) m³/min (cfm)
  - 100.6 (3551.3) m³/min (cfm)
  - 94.3 (3328.6) m³/min (cfm)

### Exhaust System

- **Exhaust stack gas temperature – °C (°F)**
  - 429.6 (805.2) °C (°F)
  - 429.6 (805.2) °C (°F)
  - 424.0 (795.1) °C (°F)
- **Exhaust gas flow rate – m³/min (cfm)**
  - 247.0 (8720.6) m³/min (cfm)
  - 247.0 (8720.6) m³/min (cfm)
  - 228.0 (8051.7) m³/min (cfm)
- **Exhaust system backpressure (maximum allowable) – kPa (in. water)**
  - 6.7 (27.0) kPa (in. water)
  - 6.7 (27.0) kPa (in. water)
  - 6.7 (27.0) kPa (in. water)

### Heat Rejection

- **Heat rejection to jacket water – kW (Btu/min)**
  - 385 (21906) kW (Btu/min)
  - 385 (21906) kW (Btu/min)
  - 376 (21384) kW (Btu/min)
- **Heat rejection to exhaust (total) – kW (Btu/min)**
  - 1067 (60682) kW (Btu/min)
  - 1067 (60682) kW (Btu/min)
  - 956 (54389) kW (Btu/min)
- **Heat rejection to aftercooler – kW (Btu/min)**
  - 386 (21957) kW (Btu/min)
  - 386 (21957) kW (Btu/min)
  - 331 (18827) kW (Btu/min)
- **Heat rejection to atmosphere from engine – kW (Btu/min)**
  - 211 (11975) kW (Btu/min)
  - 211 (11975) kW (Btu/min)
  - 192 (10917) kW (Btu/min)
- **Heat rejection from alternator – kW (Btu/min)**
  - 57.9 (3293) kW (Btu/min)
  - 57.9 (3293) kW (Btu/min)
  - 51.8 (2946) kW (Btu/min)

### Emissions* (Nominal)

- **NOx mg/Nm³ (g/hp-h)**
  - 2620.2 (5.76) mg/Nm³ (g/hp-h)
  - 2620.2 (5.76) mg/Nm³ (g/hp-h)
  - 2714.1 (5.91) mg/Nm³ (g/hp-h)
- **CO mg/Nm³ (g/hp-h)**
  - 122.4 (0.26) mg/Nm³ (g/hp-h)
  - 122.4 (0.26) mg/Nm³ (g/hp-h)
  - 193.0 (0.41) mg/Nm³ (g/hp-h)
- **HC mg/Nm³ (g/hp-h)**
  - 5.1 (0.01) mg/Nm³ (g/hp-h)
  - 5.1 (0.01) mg/Nm³ (g/hp-h)
  - 6.0 (0.01) mg/Nm³ (g/hp-h)
- **PM mg/Nm³ (g/hp-h)**
  - 23.5 (0.06) mg/Nm³ (g/hp-h)
  - 23.5 (0.06) mg/Nm³ (g/hp-h)
  - 37.0 (0.06) mg/Nm³ (g/hp-h)

### Emissions* (Potential Site Variation)

- **NOx mg/Nm³ (g/hp-h)**
  - 3170.5 (6.97) mg/Nm³ (g/hp-h)
  - 3170.5 (6.97) mg/Nm³ (g/hp-h)
  - 3284.0 (7.15) mg/Nm³ (g/hp-h)
- **CO mg/Nm³ (g/hp-h)**
  - 228.9 (0.49) mg/Nm³ (g/hp-h)
  - 228.9 (0.49) mg/Nm³ (g/hp-h)
  - 360.8 (0.76) mg/Nm³ (g/hp-h)
- **HC mg/Nm³ (g/hp-h)**
  - 9.7 (0.02) mg/Nm³ (g/hp-h)
  - 9.7 (0.02) mg/Nm³ (g/hp-h)
  - 11.3 (0.03) mg/Nm³ (g/hp-h)
- **PM mg/Nm³ (g/hp-h)**
  - 45.9 (0.11) mg/Nm³ (g/hp-h)
  - 45.9 (0.11) mg/Nm³ (g/hp-h)
  - 72.1 (0.17) mg/Nm³ (g/hp-h)

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

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<td>1120 ekW</td>
<td>1020 ekW</td>
</tr>
<tr>
<td>Genset power rating with fan @ 0.8 power factor</td>
<td>1400 kVA</td>
<td>1400 kVA</td>
<td>1275 kVA</td>
</tr>
<tr>
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<td>Low Fuel</td>
<td>Low Fuel</td>
<td>Low Fuel</td>
</tr>
<tr>
<td>Performance number</td>
<td>EM2321-03</td>
<td>EM2529-01</td>
<td>EM2535-02</td>
</tr>
</tbody>
</table>

### Fuel Consumption

<table>
<thead>
<tr>
<th>Load Percentage</th>
<th>L/hr (gal/hr)</th>
<th>L/hr (gal/hr)</th>
<th>L/hr (gal/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>292.1 (77.2)</td>
<td>292.1 (77.2)</td>
<td>264.9 (70.0)</td>
</tr>
<tr>
<td>75%</td>
<td>217.4 (57.4)</td>
<td>217.4 (57.4)</td>
<td>198.5 (52.4)</td>
</tr>
<tr>
<td>50%</td>
<td>149.4 (39.5)</td>
<td>149.4 (39.5)</td>
<td>138.1 (36.5)</td>
</tr>
<tr>
<td>25%</td>
<td>87.9 (23.2)</td>
<td>87.9 (23.2)</td>
<td>82.0 (21.7)</td>
</tr>
</tbody>
</table>

### Cooling System

<table>
<thead>
<tr>
<th>Specification</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiator air flow restriction (system) – kPa (in. water)</td>
<td>0.12 (0.48)</td>
<td>0.12 (0.48)</td>
<td>0.12 (0.48)</td>
</tr>
<tr>
<td>Radiator air flow – m³/min (cfm)</td>
<td>1355 (47851)</td>
<td>1355 (47851)</td>
<td>1355 (47851)</td>
</tr>
<tr>
<td>Engine coolant capacity – L (gal)</td>
<td>55.0 (14.5)</td>
<td>55.0 (14.5)</td>
<td>55.0 (14.5)</td>
</tr>
<tr>
<td>Radiator coolant capacity – L (gal)</td>
<td>55.0 (14.5)</td>
<td>55.0 (14.5)</td>
<td>55.0 (14.5)</td>
</tr>
<tr>
<td>Total coolant capacity – L (gal)</td>
<td>110.0 (29.0)</td>
<td>110.0 (29.0)</td>
<td>110.0 (29.0)</td>
</tr>
</tbody>
</table>

### Inlet Air

<table>
<thead>
<tr>
<th>Specification</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustion air inlet flow rate – m³/min (cfm)</td>
<td>95.5 (3372.4)</td>
<td>95.5 (3372.4)</td>
<td>86.6 (3129.9)</td>
</tr>
</tbody>
</table>

### Exhaust System

<table>
<thead>
<tr>
<th>Specification</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust stack gas temperature – °C (°F)</td>
<td>424.9 (796.8)</td>
<td>424.9 (796.8)</td>
<td>420.4 (788.6)</td>
</tr>
<tr>
<td>Exhaust gas flow rate – m³/min (cfm)</td>
<td>231.7 (8179.8)</td>
<td>231.7 (8179.8)</td>
<td>212.1 (7488.9)</td>
</tr>
<tr>
<td>Exhaust system backpressure (maximum allowable) – kPa (in. water)</td>
<td>6.7 (27.0)</td>
<td>6.7 (27.0)</td>
<td>6.7 (27.0)</td>
</tr>
</tbody>
</table>

### Heat Rejection

<table>
<thead>
<tr>
<th>Specification</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat rejection to jacket water – kW (Btu/min)</td>
<td>378 (21495)</td>
<td>378 (21495)</td>
<td>366 (20840)</td>
</tr>
<tr>
<td>Heat rejection to exhaust (total) – kW (Btu/min)</td>
<td>977 (55537)</td>
<td>977 (55537)</td>
<td>873 (49648)</td>
</tr>
<tr>
<td>Heat rejection to aftercooler – kW (Btu/min)</td>
<td>341 (19408)</td>
<td>341 (19408)</td>
<td>288 (16375)</td>
</tr>
<tr>
<td>Heat rejection to atmosphere from engine – kW (Btu/min)</td>
<td>195 (11114)</td>
<td>195 (11114)</td>
<td>177 (10080)</td>
</tr>
<tr>
<td>Heat rejection from alternator – kW (Btu/min)</td>
<td>52.8 (3003)</td>
<td>52.8 (3003)</td>
<td>45.8 (2605)</td>
</tr>
</tbody>
</table>

### Emissions* (Nominal)

<table>
<thead>
<tr>
<th>Emission</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx mg/Nm³ (g/hp-h)</td>
<td>2692.3 (5.88)</td>
<td>2692.3 (5.88)</td>
<td>2830.1 (6.08)</td>
</tr>
<tr>
<td>CO mg/Nm³ (g/hp-h)</td>
<td>178.3 (0.38)</td>
<td>178.3 (0.38)</td>
<td>263.3 (0.54)</td>
</tr>
<tr>
<td>HC mg/Nm³ (g/hp-h)</td>
<td>5.8 (0.01)</td>
<td>5.8 (0.01)</td>
<td>6.7 (0.02)</td>
</tr>
<tr>
<td>PM mg/Nm³ (g/hp-h)</td>
<td>34.6 (0.08)</td>
<td>34.6 (0.08)</td>
<td>47.0 (0.11)</td>
</tr>
</tbody>
</table>

### Emissions* (Potential Site Variation)

<table>
<thead>
<tr>
<th>Emission</th>
<th>Standby</th>
<th>Mission Critical</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx mg/Nm³ (g/hp-h)</td>
<td>3257.6 (7.11)</td>
<td>3257.6 (7.11)</td>
<td>3424.4 (7.36)</td>
</tr>
<tr>
<td>CO mg/Nm³ (g/hp-h)</td>
<td>333.4 (0.71)</td>
<td>333.4 (0.71)</td>
<td>492.4 (1.01)</td>
</tr>
<tr>
<td>HC mg/Nm³ (g/hp-h)</td>
<td>11.0 (0.03)</td>
<td>11.0 (0.03)</td>
<td>12.7 (0.03)</td>
</tr>
<tr>
<td>PM mg/Nm³ (g/hp-h)</td>
<td>67.4 (0.16)</td>
<td>67.4 (0.16)</td>
<td>91.6 (0.22)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Dim “A” mm (in)</th>
<th>Dim “B” mm (in)</th>
<th>Dim “C” mm (in)</th>
<th>Dry Weight kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4485 (176.6)</td>
<td>2228 (87.7)</td>
<td>2194 (86.4)</td>
<td>8099 (17855)</td>
</tr>
</tbody>
</table>

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

Ratings Definitions

**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.

**Mission Critical**
Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

**Prime**
Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated eW 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

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 DCP application of Cat diesel generator set prime 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 rates are based on fuel oil of 35º API [16°C (60°F)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 29ºC (85ºF) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.)