

# Cat® 3512B

## 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 <sup>3</sup> ) | 58.56 (3573.55) |
| Compression Ratio                   | 14.0:1          |
| Aspiration                          | TA              |
| Fuel System                         | EUI             |
| Governor Type                       | ADEM™ A3        |

| Standby<br>60 Hz ekW (kVA) | Mission Critical<br>60 Hz ekW (kVA) | Prime<br>60 Hz ekW (kVA) | Continuous<br>60 Hz ekW (kVA) | Emissions Performance                                  |
|----------------------------|-------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------|
| 1500 (1875)                | 1500 (1875)                         | 1360 (1700)              | 1230 (1537)                   | Optimized for Low Fuel Consumption<br>or Low Emissions |

### Standard Features

#### Cat® Diesel Engine

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

#### Generator Set Package

- Accepts 100% block load in one step and meets other 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

- 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

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

#### 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    3000A
- 2000A    3200A
- 2500A
- UL    IEC
- 3-pole    4-pole
- Manually operated
- Electrically operated

#### Trip Unit

- LSI    LSI-G
- LSIG-P

### 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
- Battery charger – 20A
- Battery charger – 35A

### Vibration Isolators

- 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

- UL2200
- 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

### Low Fuel Consumption (30°C SCAC)

| Performance                                                       | Standby   |           | Mission Critical |           | Prime     |           | Continuous |          |
|-------------------------------------------------------------------|-----------|-----------|------------------|-----------|-----------|-----------|------------|----------|
| Frequency                                                         | 60 Hz     |           | 60 Hz            |           | 60 Hz     |           | 60 Hz      |          |
| Gen set power rating with fan                                     | 1500 ekW  |           | 1500 ekW         |           | 1360 ekW  |           | 1230 ekW   |          |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA  |           | 1875 kVA         |           | 1700 kVA  |           | 1537 kVA   |          |
| Emissions                                                         | Low Fuel  |           | Low Fuel         |           | Low Fuel  |           | Low Fuel   |          |
| Performance number                                                | DM8200-02 |           | EM0641-00        |           | DM8203-01 |           | DM8188-01  |          |
| <b>Fuel Consumption</b>                                           |           |           |                  |           |           |           |            |          |
| 100% load with fan – L/hr (gal/hr)                                | 401.6     | (106.1)   | 401.6            | (106.1)   | 364.4     | (96.3)    | 329.4      | (87.0)   |
| 75% load with fan – L/hr (gal/hr)                                 | 300.0     | (79.2)    | 300.0            | (79.2)    | 271.8     | (71.8)    | 246.6      | (65.1)   |
| 50% load with fan – L/hr (gal/hr)                                 | 203.8     | (53.8)    | 203.8            | (53.8)    | 187.5     | (49.5)    | 173.9      | (45.9)   |
| 25% load with fan – L/hr (gal/hr)                                 | 123.7     | (32.7)    | 123.7            | (32.7)    | 116.2     | (30.7)    | 109.4      | (28.9)   |
| <b>Cooling System</b>                                             |           |           |                  |           |           |           |            |          |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12      | (0.48)    | 0.12             | (0.48)    | 0.12      | (0.48)    | 0.12       | (0.48)   |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671      | (59010)   | 1671             | (59010)   | 1671      | (59010)   | 1671       | (59010)  |
| Engine coolant capacity – L (gal)                                 | 156.8     | (41.4)    | 156.8            | (41.4)    | 156.8     | (41.4)    | 156.8      | (41.4)   |
| Radiator coolant capacity – L (gal)                               | 149       | (39.4)    | 149              | (39.4)    | 149       | (39.4)    | 149        | (39.4)   |
| Total coolant capacity – L (gal)                                  | 305.8     | (80.8)    | 305.8            | (80.8)    | 305.8     | (80.8)    | 305.8      | (80.8)   |
| <b>Inlet Air</b>                                                  |           |           |                  |           |           |           |            |          |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 135.6     | (4788.2)  | 135.6            | (4788.2)  | 124.8     | (4406.8)  | 117.5      | (4148.9) |
| <b>Exhaust System</b>                                             |           |           |                  |           |           |           |            |          |
| Exhaust stack gas temperature – °C (°F)                           | 429.8     | (805.6)   | 429.8            | (805.6)   | 427.2     | (801.0)   | 410.3      | (770.5)  |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 335.3     | (11839.9) | 335.3            | (11839.9) | 307.4     | (10854.5) | 282.2      | (9964.4) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7       | (27.0)    | 6.7              | (27.0)    | 6.7       | (27.0)    | 6.7        | (27.0)   |
| <b>Heat Rejection</b>                                             |           |           |                  |           |           |           |            |          |
| Heat rejection to jacket water – kW (Btu/min)                     | 600       | 34122     | 600              | 34122     | 558       | 31733     | 519        | 29515    |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1447      | 82291     | 1447             | 82291     | 1301      | 73986     | 1172       | 66649    |
| Heat rejection to aftercooler – kW (Btu/min)                      | 484       | 27525     | 484              | 27525     | 414       | 23544     | 355        | 20188    |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 131       | 7450      | 131              | 7450      | 121       | 6881      | 113        | 6426     |
| Heat rejection from alternator – kW (Btu/min)                     | 74        | 4208      | 74               | 4208      | 66        | 3731      | 61         | 3455     |
| <b>Emissions (Nominal)</b>                                        |           |           |                  |           |           |           |            |          |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 3196.5    | 6.81      | 3196.5           | 6.81      | 2865.8    | 6.10      | 2858.7     | 6.07     |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 706.5     | 1.51      | 706.5            | 1.51      | 573.1     | 1.22      | 675.6      | 1.43     |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 190.2     | 0.41      | 190.2            | 0.41      | 202.0     | 0.43      | 186.2      | 0.40     |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 79.4      | 0.17      | 79.4             | 0.17      | 58.5      | 0.12      | 50.3       | 0.11     |
| <b>Emissions (Potential Site Variation)</b>                       |           |           |                  |           |           |           |            |          |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 3835.8    | 8.18      | 3835.8           | 8.18      | 3439.0    | 7.32      | 3430.5     | 7.28     |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1271.7    | 2.71      | 1271.7           | 2.71      | 1031.6    | 2.20      | 1216.1     | 2.58     |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 253.0     | 0.54      | 253.0            | 0.54      | 268.7     | 0.57      | 247.6      | 0.53     |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 111.2     | 0.24      | 111.2            | 0.24      | 81.9      | 0.17      | 70.4       | 0.15     |

## Package Performance

### Low Fuel Consumption (60°C SCAC)

| Performance                                                       | Standby   |           | Mission Critical |           | Prime     |           | Continuous |           |
|-------------------------------------------------------------------|-----------|-----------|------------------|-----------|-----------|-----------|------------|-----------|
| Frequency                                                         | 60 Hz     |           | 60 Hz            |           | 60 Hz     |           | 60 Hz      |           |
| Gen set power rating with fan                                     | 1500 ekW  |           | 1500 ekW         |           | 1360 ekW  |           | 1230 ekW   |           |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA  |           | 1875 kVA         |           | 1700 kVA  |           | 1537 kVA   |           |
| Emissions                                                         | Low Fuel  |           | Low Fuel         |           | Low Fuel  |           | Low Fuel   |           |
| Performance number                                                | DM8201-02 |           | EM0642-00        |           | DM8204-01 |           | DM8189-02  |           |
| <b>Fuel Consumption</b>                                           |           |           |                  |           |           |           |            |           |
| 100% load with fan – L/hr (gal/hr)                                | 404.1     | (106.8)   | 404.1            | (106.8)   | 365.1     | (96.5)    | 332.2      | (87.8)    |
| 75% load with fan – L/hr (gal/hr)                                 | 301.7     | (79.7)    | 301.7            | (79.7)    | 272.9     | (72.1)    | 248.0      | (65.5)    |
| 50% load with fan – L/hr (gal/hr)                                 | 206.5     | (54.5)    | 206.5            | (54.5)    | 190.6     | (50.3)    | 176.5      | (46.6)    |
| 25% load with fan – L/hr (gal/hr)                                 | 124.5     | (32.9)    | 124.5            | (32.9)    | 116.9     | (30.9)    | 110.0      | (29.1)    |
| <b>Cooling System</b>                                             |           |           |                  |           |           |           |            |           |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12      | (0.48)    | 0.12             | (0.48)    | 0.12      | (0.48)    | 0.12       | (0.48)    |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671      | (59010)   | 1671             | (59010)   | 1671      | (59010)   | 1671       | (59010)   |
| Engine coolant capacity – L (gal)                                 | 156.8     | (41.4)    | 156.8            | (41.4)    | 156.8     | (41.4)    | 156.8      | (41.4)    |
| Radiator coolant capacity – L (gal)                               | 149       | (39.4)    | 149              | (39.4)    | 149       | (39.4)    | 149        | (39.4)    |
| Total coolant capacity – L (gal)                                  | 305.8     | (80.8)    | 305.8            | (80.8)    | 305.8     | (80.8)    | 305.8      | (80.8)    |
| <b>Inlet Air</b>                                                  |           |           |                  |           |           |           |            |           |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 127.9     | (4516.3)  | 127.9            | (4516.3)  | 122.1     | (4311.4)  | 116.4      | (4110.1)  |
| <b>Exhaust System</b>                                             |           |           |                  |           |           |           |            |           |
| Exhaust stack gas temperature – °C (°F)                           | 474.5     | (886.1)   | 474.5            | (886.1)   | 448.1     | (838.6)   | 430.0      | (806.0)   |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 337.1     | (11903.4) | 337.1            | (11903.4) | 310.0     | (10946.3) | 287.8      | (10162.2) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7       | (27.0)    | 6.7              | (27.0)    | 6.7       | (27.0)    | 6.7        | (27.0)    |
| <b>Heat Rejection</b>                                             |           |           |                  |           |           |           |            |           |
| Heat rejection to jacket water – kW (Btu/min)                     | 630       | (35828)   | 630              | (35828)   | 586       | (33325)   | 545        | (30993)   |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1516      | (86215)   | 1516             | (86215)   | 1349      | (76716)   | 1212       | (68924)   |
| Heat rejection to aftercooler – kW (Btu/min)                      | 398       | (22634)   | 398              | (22634)   | 347       | (19733)   | 300        | (17060)   |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 144       | (8189)    | 144              | (8189)    | 130       | (7393)    | 121        | (6881)    |
| Heat rejection from alternator – kW (Btu/min)                     | 74        | (4208)    | 74               | (4208)    | 66        | (3731)    | 61         | (3455)    |
| <b>Emissions (Nominal)</b>                                        |           |           |                  |           |           |           |            |           |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 3833.1    | (8.21)    | 3833.1           | (8.21)    | 3644.2    | (7.77)    | 3447.8     | (7.38)    |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 682.0     | (1.46)    | 682.0            | (1.46)    | 695.5     | (1.48)    | 666.1      | (1.43)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 181.5     | (0.39)    | 181.5            | (0.39)    | 189.8     | (0.40)    | 183.6      | (0.39)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 55.3      | (0.12)    | 55.3             | (0.12)    | 46.8      | (0.10)    | 41.6       | (0.09)    |
| <b>Emissions (Potential Site Variation)</b>                       |           |           |                  |           |           |           |            |           |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 4599.7    | (9.86)    | 4599.7           | (9.86)    | 4373.1    | (9.33)    | 4137.3     | (8.86)    |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1227.6    | (2.63)    | 1227.6           | (2.63)    | 1251.9    | (2.67)    | 1199.0     | (2.57)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 241.4     | (0.52)    | 241.4            | (0.52)    | 252.4     | (0.54)    | 244.2      | (0.52)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 77.4      | (0.17)    | 77.4             | (0.17)    | 65.5      | (0.14)    | 58.2       | (0.12)    |

## Package Performance

### Low Fuel Consumption (90°C SCAC)

| Performance                                                       | Standby         | Mission Critical | Prime           | Continuous      |
|-------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------|
| Frequency                                                         | 60 Hz           | 60 Hz            | 60 Hz           | 60 Hz           |
| Gen set power rating with fan                                     | 1500 ekW        | 1500 ekW         | 1360 ekW        | 1230 ekW        |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA        | 1875 kVA         | 1700 kVA        | 1537 kVA        |
| Emissions                                                         | Low Fuel        | Low Fuel         | Low Fuel        | Low Fuel        |
| Performance number                                                | DM8202-01       | EM0643-00        | DM8205-01       | DM8190-01       |
| <b>Fuel Consumption</b>                                           |                 |                  |                 |                 |
| 100% load with fan – L/hr (gal/hr)                                | 411.3 (108.6)   | 411.3 (108.6)    | 372.3 (98.3)    | 334.0 (88.2)    |
| 75% load with fan – L/hr (gal/hr)                                 | 302.9 (80.0)    | 302.9 (80.0)     | 272.1 (71.9)    | 249.2 (65.8)    |
| 50% load with fan – L/hr (gal/hr)                                 | 208.6 (55.1)    | 208.6 (55.1)     | 192.8 (50.9)    | 178.4 (47.1)    |
| 25% load with fan – L/hr (gal/hr)                                 | 126.1 (33.3)    | 126.1 (33.3)     | 118.6 (31.3)    | 111.8 (29.5)    |
| <b>Cooling System</b>                                             |                 |                  |                 |                 |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12 (0.48)     | 0.12 (0.48)      | 0.12 (0.48)     | 0.12 (0.48)     |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671 (59010)    | 1671 (59010)     | 1671 (59010)    | 1671 (59010)    |
| Engine coolant capacity – L (gal)                                 | 156.8 (41.4)    | 156.8 (41.4)     | 156.8 (41.4)    | 156.8 (41.4)    |
| Radiator coolant capacity – L (gal)                               | 149 (39.4)      | 149 (39.4)       | 149 (39.4)      | 149 (39.4)      |
| Total coolant capacity – L (gal)                                  | 305.8 (80.8)    | 305.8 (80.8)     | 305.8 (80.8)    | 305.8 (80.8)    |
| <b>Inlet Air</b>                                                  |                 |                  |                 |                 |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 125.7 (4438.6)  | 125.7 (4438.6)   | 120.7 (4262.0)  | 114.1 (4028.9)  |
| <b>Exhaust System</b>                                             |                 |                  |                 |                 |
| Exhaust stack gas temperature – °C (°F)                           | 503.7 (938.7)   | 503.7 (938.7)    | 476.5 (889.7)   | 450.3 (842.5)   |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 344.8 (12175.3) | 344.8 (12175.3)  | 318.9 (11260.6) | 290.3 (10250.4) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7 (27.0)      | 6.7 (27.0)       | 6.7 (27.0)      | 6.7 (27.0)      |
| <b>Heat Rejection</b>                                             |                 |                  |                 |                 |
| Heat rejection to jacket water – kW (Btu/min)                     | 668 (37989)     | 668 (37989)      | 620 (35259)     | 576 (32756)     |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1595 (90708)    | 1595 (90708)     | 1412 (80298)    | 1252 (71198)    |
| Heat rejection to aftercooler – kW (Btu/min)                      | 351 (19962)     | 351 (19962)      | 299 (17004)     | 252 (14330)     |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 157 (8929)      | 157 (8929)       | 143 (8132)      | 132 (7507)      |
| Heat rejection from alternator – kW (Btu/min)                     | 74 (4208)       | 74 (4208)        | 66 (3731)       | 61 (3455)       |
| <b>Emissions (Nominal)</b>                                        |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 4515.6 (9.84)   | 4515.6 (9.84)    | 4329.2 (9.42)   | 4316.0 (9.29)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 656.6 (1.43)    | 656.6 (1.43)     | 654.8 (1.42)    | 636.4 (1.37)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 173.3 (0.38)    | 173.3 (0.38)     | 196.5 (0.43)    | 180.9 (0.39)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 51.6 (0.11)     | 51.6 (0.11)      | 41.5 (0.09)     | 34.7 (0.07)     |
| <b>Emissions (Potential Site Variation)</b>                       |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 5418.7 (11.81)  | 5418.7 (11.81)   | 5195.0 (11.30)  | 5179.2 (11.15)  |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1181.9 (2.58)   | 1181.9 (2.58)    | 1178.6 (2.56)   | 1145.5 (2.47)   |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 230.5 (0.50)    | 230.5 (0.50)     | 261.3 (0.57)    | 240.6 (0.52)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 72.2 (0.16)     | 72.2 (0.16)      | 58.1 (0.13)     | 48.6 (0.10)     |

## Package Performance

### Low Emissions (30°C SCAC)

| Performance                                                       | Standby         | Mission Critical | Prime           | Continuous      |
|-------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------|
| Frequency                                                         | 60 Hz           | 60 Hz            | 60 Hz           | 60 Hz           |
| Gen set power rating with fan                                     | 1500 ekW        | 1500 ekW         | 1360 ekW        | 1230 ekW        |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA        | 1875 kVA         | 1700 kVA        | 1537 kVA        |
| Emissions                                                         | Low Emissions   | Low Emissions    | Low Emissions   | Low Emissions   |
| Performance number                                                | DM8206-01       | EM0644-00        | DM8209-01       | DM8197-01       |
| <b>Fuel Consumption</b>                                           |                 |                  |                 |                 |
| 100% load with fan – L/hr (gal/hr)                                | 432.5 (114.2)   | 432.5 (114.2)    | 392.4 (103.7)   | 355.4 (93.9)    |
| 75% load with fan – L/hr (gal/hr)                                 | 322.6 (85.2)    | 322.6 (85.2)     | 290.6 (76.8)    | 261.9 (69.2)    |
| 50% load with fan – L/hr (gal/hr)                                 | 212.8 (56.2)    | 212.8 (56.2)     | 194.3 (51.3)    | 179.5 (47.4)    |
| 25% load with fan – L/hr (gal/hr)                                 | 126.4 (33.4)    | 126.4 (33.4)     | 118.7 (31.4)    | 111.7 (29.5)    |
| <b>Cooling System</b>                                             |                 |                  |                 |                 |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12 (0.48)     | 0.12 (0.48)      | 0.12 (0.48)     | 0.12 (0.48)     |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671 (59010)    | 1671 (59010)     | 1671 (59010)    | 1671 (59010)    |
| Engine coolant capacity – L (gal)                                 | 156.8 (41.4)    | 156.8 (41.4)     | 156.8 (41.4)    | 156.8 (41.4)    |
| Radiator coolant capacity – L (gal)                               | 149 (39.4)      | 149 (39.4)       | 149 (39.4)      | 149 (39.4)      |
| Total coolant capacity – L (gal)                                  | 305.8 (80.8)    | 305.8 (80.8)     | 305.8 (80.8)    | 305.8 (80.8)    |
| <b>Inlet Air</b>                                                  |                 |                  |                 |                 |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 143.1 (5053.0)  | 143.1 (5053.0)   | 134.6 (4752.8)  | 127.3 (4495.0)  |
| <b>Exhaust System</b>                                             |                 |                  |                 |                 |
| Exhaust stack gas temperature – °C (°F)                           | 469.8 (877.6)   | 469.8 (877.6)    | 457.3 (855.1)   | 438.8 (821.8)   |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 374.3 (13217.0) | 374.3 (13217.0)  | 345.8 (12210.4) | 318.1 (11232.1) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7 (27.0)      | 6.7 (27.0)       | 6.7 (27.0)      | 6.7 (27.0)      |
| <b>Heat Rejection</b>                                             |                 |                  |                 |                 |
| Heat rejection to jacket water – kW (Btu/min)                     | 632 (35942)     | 632 (35942)      | 588 (33439)     | 546 (31050)     |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1649 (93779)    | 1649 (93779)     | 1494 (84962)    | 1343 (76373)    |
| Heat rejection to aftercooler – kW (Btu/min)                      | 555 (31561)     | 555 (31561)      | 476 (27069)     | 416 (23657)     |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 149 (8474)      | 149 (8474)       | 134 (7620)      | 122 (6938)      |
| Heat rejection from alternator – kW (Btu/min)                     | 74 (4208)       | 74 (4208)        | 66 (3731)       | 61 (3455)       |
| <b>Emissions (Nominal)</b>                                        |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 2265.1 (5.20)   | 2265.1 (5.20)    | 2006.7 (4.60)   | 1946.2 (4.46)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 680.8 (1.56)    | 680.8 (1.56)     | 682.8 (1.57)    | 713.1 (1.63)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 218.1 (0.50)    | 218.1 (0.50)     | 125.7 (0.29)    | 130.9 (0.30)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 85.2 (0.20)     | 85.2 (0.20)      | 85.7 (0.20)     | 87.0 (0.20)     |
| <b>Emissions (Potential Site Variation)</b>                       |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 2718.2 (6.24)   | 2718.2 (6.24)    | 2408.0 (5.52)   | 2335.4 (5.35)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1225.4 (2.81)   | 1225.4 (2.81)    | 1229.0 (2.82)   | 1283.6 (2.94)   |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 290.1 (0.67)    | 290.1 (0.67)     | 167.2 (0.38)    | 174.1 (0.40)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 119.3 (0.27)    | 119.3 (0.27)     | 120.0 (0.28)    | 121.8 (0.28)    |

## Package Performance

### Low Emissions (60°C SCAC)

| Performance                                                       | Standby         | Mission Critical | Prime           | Continuous      |
|-------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------|
| Frequency                                                         | 60 Hz           | 60 Hz            | 60 Hz           | 60 Hz           |
| Gen set power rating with fan                                     | 1500 ekW        | 1500 ekW         | 1360 ekW        | 1230 ekW        |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA        | 1875 kVA         | 1700 kVA        | 1537 kVA        |
| Emissions                                                         | Low Emissions   | Low Emissions    | Low Emissions   | Low Emissions   |
| Performance number                                                | DM8207-01       | EM0645-00        | DM8210-01       | DM8198-02       |
| Fuel Consumption                                                  |                 |                  |                 |                 |
| 100% load with fan – L/hr (gal/hr)                                | 420.9 (111.2)   | 420.9 (111.2)    | 384.2 (101.5)   | 343.2 (90.7)    |
| 75% load with fan – L/hr (gal/hr)                                 | 314.9 (83.2)    | 314.9 (83.2)     | 287.4 (75.9)    | 261.2 (69.0)    |
| 50% load with fan – L/hr (gal/hr)                                 | 213.4 (56.4)    | 213.4 (56.4)     | 194.4 (51.3)    | 179.3 (47.4)    |
| 25% load with fan – L/hr (gal/hr)                                 | 125.5 (33.2)    | 125.5 (33.2)     | 117.7 (31.1)    | 110.6 (29.2)    |
| Cooling System                                                    |                 |                  |                 |                 |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12 (0.48)     | 0.12 (0.48)      | 0.12 (0.48)     | 0.12 (0.48)     |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671 (59010)    | 1671 (59010)     | 1671 (59010)    | 1671 (59010)    |
| Engine coolant capacity – L (gal)                                 | 156.8 (41.4)    | 156.8 (41.4)     | 156.8 (41.4)    | 156.8 (41.4)    |
| Radiator coolant capacity – L (gal)                               | 149 (39.4)      | 149 (39.4)       | 149 (39.4)      | 149 (39.4)      |
| Total coolant capacity – L (gal)                                  | 305.8 (80.8)    | 305.8 (80.8)     | 305.8 (80.8)    | 305.8 (80.8)    |
| Inlet Air                                                         |                 |                  |                 |                 |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 134.9 (4763.4)  | 134.9 (4763.4)   | 129.7 (4579.8)  | 122.2 (4314.9)  |
| Exhaust System                                                    |                 |                  |                 |                 |
| Exhaust stack gas temperature – °C (°F)                           | 482.2 (900.0)   | 482.2 (900.0)    | 461.6 (862.9)   | 432.8 (811.0)   |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 359.2 (12683.7) | 359.2 (12683.7)  | 335.3 (11839.6) | 302.8 (10691.9) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7 (27.0)      | 6.7 (27.0)       | 6.7 (27.0)      | 6.7 (27.0)      |
| Heat Rejection                                                    |                 |                  |                 |                 |
| Heat rejection to jacket water – kW (Btu/min)                     | 647 (36795)     | 647 (36795)      | 604 (34349)     | 563 (32017)     |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1609 (91504)    | 1609 (91504)     | 1451 (82516)    | 1304 (74155)    |
| Heat rejection to aftercooler – kW (Btu/min)                      | 442 (25137)     | 442 (25137)      | 391 (22236)     | 340 (19335)     |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 157 (8929)      | 157 (8929)       | 141 (8018)      | 129 (7336)      |
| Heat rejection from alternator – kW (Btu/min)                     | 74 (4208)       | 74 (4208)        | 66 (3731)       | 61 (3455)       |
| Emissions (Nominal)                                               |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 3075.1 (6.87)   | 3075.1 (6.87)    | 2647.9 (5.95)   | 2803.2 (6.21)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 636.0 (1.42)    | 636.0 (1.42)     | 670.6 (1.51)    | 708.2 (1.57)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 210.6 (0.47)    | 210.6 (0.47)     | 123.6 (0.28)    | 130.1 (0.29)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 46.7 (0.10)     | 46.7 (0.10)      | 59.9 (0.13)     | 59.8 (0.13)     |
| Emissions (Potential Site Variation)                              |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 3690.2 (8.24)   | 3690.2 (8.24)    | 3177.5 (7.15)   | 3363.8 (7.46)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1144.8 (.256)   | 1144.8 (.256)    | 1207.1 (2.71)   | 1274.8 (2.83)   |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 280.1 (0.63)    | 280.1 (0.63)     | 164.4 (0.37)    | 173.0 (0.38)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 65.4 (0.15)     | 65.4 (0.15)      | 83.9 (0.19)     | 83.7 (0.19)     |



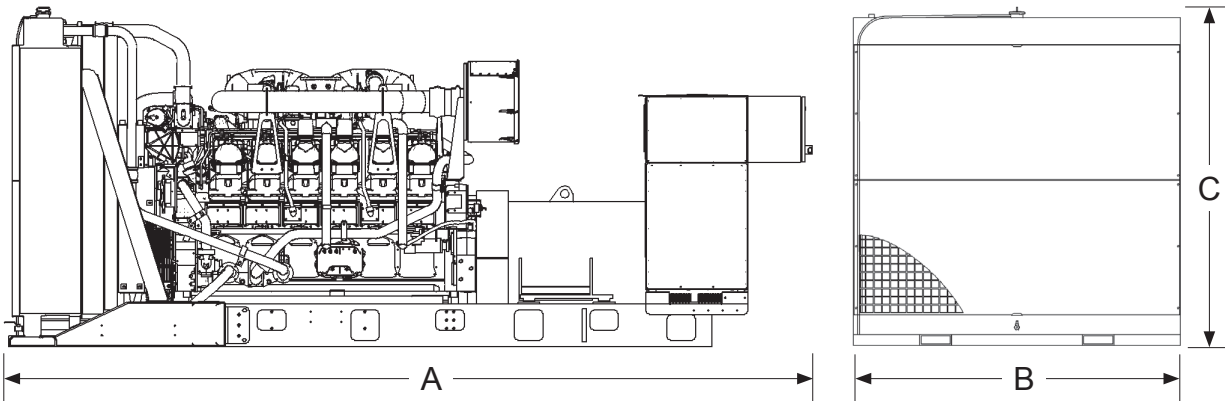
## Package Performance

### Low Emissions (90°C SCAC)

| Performance                                                       | Standby         | Mission Critical | Prime           | Continuous      |
|-------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------|
| Frequency                                                         | 60 Hz           | 60 Hz            | 60 Hz           | 60 Hz           |
| Gen set power rating with fan                                     | 1500 ekW        | 1500 ekW         | 1360 ekW        | 1230 ekW        |
| Gen set power rating with fan @ 0.8 power factor                  | 1875 kVA        | 1875 kVA         | 1700 kVA        | 1537 kVA        |
| Emissions                                                         | Low Emissions   | Low Emissions    | Low Emissions   | Low Emissions   |
| Performance number                                                | DM8208-01       | EM0646-01        | DM8211-01       | DM8198-02       |
| Fuel Consumption                                                  |                 |                  |                 |                 |
| 100% load with fan – L/hr (gal/hr)                                | 411.3 (108.6)   | 411.3 (108.6)    | 372.1 (98.3)    | 343.2 (90.7)    |
| 75% load with fan – L/hr (gal/hr)                                 | 309.6 (81.8)    | 309.6 (81.8)     | 288.3 (76.2)    | 261.2 (69.0)    |
| 50% load with fan – L/hr (gal/hr)                                 | 223.1 (58.9)    | 223.1 (58.9)     | 206.3 (54.5)    | 179.3 (47.4)    |
| 25% load with fan – L/hr (gal/hr)                                 | 133.1 (35.2)    | 133.1 (35.2)     | 124.7 (32.9)    | 110.6 (29.2)    |
| Cooling System                                                    |                 |                  |                 |                 |
| Radiator air flow restriction (system) – kPa (in. water)          | 0.12 (0.48)     | 0.12 (0.48)      | 0.12 (0.48)     | 0.12 (0.48)     |
| Radiator air flow – m <sup>3</sup> /min (cfm)                     | 1671 (59010)    | 1671 (59010)     | 1671 (59010)    | 1671 (59010)    |
| Engine coolant capacity – L (gal)                                 | 156.8 (41.4)    | 156.8 (41.4)     | 156.8 (41.4)    | 156.8 (41.4)    |
| Radiator coolant capacity – L (gal)                               | 149 (39.4)      | 149 (39.4)       | 149 (39.4)      | 149 (39.4)      |
| Total coolant capacity – L (gal)                                  | 305.8 (80.8)    | 305.8 (80.8)     | 305.8 (80.8)    | 305.8 (80.8)    |
| Inlet Air                                                         |                 |                  |                 |                 |
| Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)        | 125.7 (4438.6)  | 125.7 (4438.6)   | 120.6 (4258.5)  | 122.2 (4314.9)  |
| Exhaust System                                                    |                 |                  |                 |                 |
| Exhaust stack gas temperature – °C (°F)                           | 503.7 (938.7)   | 503.7 (938.7)    | 476.0 (888.8)   | 432.8 (811.0)   |
| Exhaust gas flow rate – m <sup>3</sup> /min (cfm)                 | 344.8 (12175.3) | 344.8 (12175.3)  | 318.5 (11246.4) | 302.8 (10691.9) |
| Exhaust system backpressure (maximum allowable) – kPa (in. water) | 6.7 (27.0)      | 6.7 (27.0)       | 6.7 (27.0)      | 6.7 (27.0)      |
| Heat Rejection                                                    |                 |                  |                 |                 |
| Heat rejection to jacket water – kW (Btu/min)                     | 666 (37875)     | 666 (37875)      | 619 (35202)     | 563 (32017)     |
| Heat rejection to exhaust (total) – kW (Btu/min)                  | 1585 (90140)    | 1585 (90140)     | 1404 (79843)    | 1304 (74155)    |
| Heat rejection to aftercooler – kW (Btu/min)                      | 350 (19905)     | 350 (19905)      | 299 (17004)     | 340 (19335)     |
| Heat rejection to atmosphere from engine – kW (Btu/min)           | 157 (8929)      | 157 (8929)       | 143 (8132)      | 129 (7336)      |
| Heat rejection from alternator – kW (Btu/min)                     | 74 (4208)       | 74 (4208)        | 66 (3731)       | 61 (3455)       |
| Emissions (Nominal)                                               |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 4515.6 (9.84)   | 4515.6 (9.84)    | 4211.7 (9.16)   | 4274.6 (9.19)   |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 656.6 (1.43)    | 656.6 (1.43)     | 644.3 (1.40)    | 682.3 (1.47)    |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 173.2 (0.38)    | 173.2 (0.38)     | 119.1 (0.26)    | 125.6 (0.27)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 51.6 (0.11)     | 51.6 (0.11)      | 47.9 (0.10)     | 41.6 (0.09)     |
| Emissions (Potential Site Variation)                              |                 |                  |                 |                 |
| NOx mg/Nm <sup>3</sup> (g/hp-h)                                   | 5418.8 (11.81)  | 5418.8 (11.81)   | 5054.0 (10.99)  | 5129.5 (11.02)  |
| CO mg/Nm <sup>3</sup> (g/hp-h)                                    | 1181.9 (2.58)   | 1181.9 (2.58)    | 1159.7 (2.52)   | 1228.1 (2.64)   |
| HC mg/Nm <sup>3</sup> (g/hp-h)                                    | 230.4 (0.50)    | 230.4 (0.50)     | 158.4 (0.34)    | 167.0 (0.36)    |
| PM mg/Nm <sup>3</sup> (g/hp-h)                                    | 72.2 (0.16)     | 72.2 (0.16)      | 67.1 (0.15)     | 58.2 (0.13)     |



## Weights and Dimensions



| Dim "A"<br>mm (in) | Dim "B"<br>mm (in) | Dim "C"<br>mm (in) | Dry Weight<br>kg (lb) |
|--------------------|--------------------|--------------------|-----------------------|
| 5636.5 (221.9)     | 2286.0 (90.0)      | 2367.2 (93.2)      | 11 380 (25,090)       |

**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 kW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

### 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 continuous rated kW for 100% of the operating hours.

### Applicable Codes and Standards

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU.

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

### Data Center Applications

Tier III/Tier IV compliant per Uptime Institute requirements. ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

### Fuel Rates

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.)

[www.cat.com/electricpower](http://www.cat.com/electricpower)

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