# Cat® 3516E

## **Diesel Generator Sets**





Bore – mm (in)	170 (6.69)
Stroke – mm (in)	215 (8.46)
Displacement – L (in³)	78.1 (4766)
Compression Ratio	14.7:1
Aspiration	ATAAC
Fuel System	EUI
Governor Type	ADEM™ A5

Image shown may not reflect actual configuration

Standby / Mission Critical 50 Hz kVA (ekW)	Emissions Performance
3000 (2400)	Tier 2 (EPA ESE) with Low NO <sub>x</sub> (<2000mg NOx)

#### **Features**

## Cat® Diesel Engine

- Tier 2 Certified (U.S. EPA Stationary Emergency) with <2000 mg NO<sub>x</sub> emissions
- Reliable performance proven in thousands of applications worldwide
- Certified alternative fuels including Hydrotreated Vegetable Oil (HVO), Renewable Diesel (RD) and Hydrotreated Renewable Diesel (HRD) which meet EN 15940 or ASTM D975 can be used or blended with EN 590 diesel

### **Generator Set Package**

- · Accepts 100% block load in one step
- 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

## Cat Energy Control System (ECS)

- 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
- Graphical touchscreen display
- · Easily upgradeable

### Warranty

- 24 months/1000-hour warranty for standby and mission critical 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

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# **Standard and Optional Equipment**

Engine	Power Termination	Vibration Isolators		
Air Cleaner  ☐ Single element ☐ Dual element	Type ☐ Bus bar ☐ IEC	<ul><li>□ Rubber</li><li>□ Spring</li><li>□ Seismic rated</li></ul>		
Muffler (45 IB)	□ NEMA	Cat Connect		
☐ Industrial grade (15 dB)	Control System	Connectivity		
Starting  ☐ Standard batteries ☐ Oversized batteries	Controller  ☐ Cat ECS 100 ☐ Cat ECS 200	☐ Ethernet ☐ Cellular		
☐ Standard electric starter(s)	□ EMCP 4.4	<b>Extended Service Options</b>		
<ul><li>☐ Heavy duty electric starter(s)</li><li>☐ Air starter(s)</li><li>☐ Jacket water heater</li></ul>	Attachments ☐ Remote annunciator module ☐ Expansion I/O module	Terms □ 2 year (prime) □ 3 year		
Alternator	☐ Remote monitoring software	☐ 5 year		
Output voltage	Charging	☐ 10 year  Coverage		
□ 400V □ 10000V □ 415V □ 10500V □ 3300V □ 11000V	<ul> <li>□ Battery charger – 10A</li> <li>□ Battery charger – 20A</li> <li>□ Battery charger – 35A</li> </ul>	☐ Silver☐ Gold☐ Platinum		
Temperature Rise (over 40°C ambient)	a battery orlarger - oork	☐ Platinum Plus		
□ 150°C		Ancillary Equipment		
□ 125°C/130°C □ 105°C		☐ Automatic transfer switch		
Winding type ☐ Random wound ☐ Form wound		<ul><li>(ATS)</li><li>□ Paralleling switchgear</li><li>□ Paralleling controls</li></ul>		
Excitation		Certifications		
☐ Internal excitation (IE) ☐ Permanent magnet (PM)		□ EU & GB Declaration of Conformi □ EU & GB Declaration of Incorpora		
<ul><li>Attachments</li><li>□ Anti-condensation heater</li><li>□ Stator and bearing temperature</li></ul>		<ul><li>□ Eurasian Conformity (EAC)</li><li>□ Telecommunication Lab of China</li></ul>		

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

monitoring and protection

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# **Package Performance**

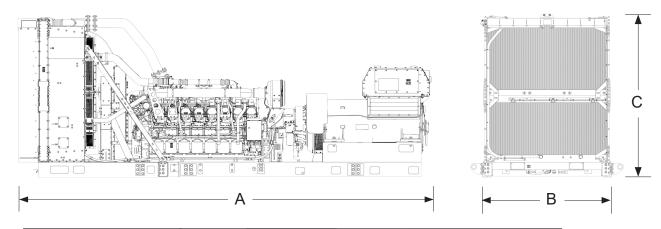
Engine Speed   1800 rpm   1800 rpm   50 Hz   50 Hz   50 Hz   2400 ekW   24	Performance		Standby		Mission Critical	
Gen set power rating with fan   2400 ekW   2400 ekW   3000 kVA	Engine Speed			1800 rpm		
Gen set power rating with fan @ 0.8 power factor 3000 kVA 3000 kVA Emissions Tier 2 (EPA ESE) Tier 2 (EPA ESE) Tier 2 (EPA ESE) Tier 2 (EPA ESE) Performance number EM6729-01 EM6731-01  Fuel Consumption  100% load with fan − L/hr (gal/hr) 657.9 (173.8) 657.9 (173.8) 75% load with fan − L/hr (gal/hr) 499.5 (132.0) 499.5 (132.0) 50% load with fan − L/hr (gal/hr) 364.6 (96.3) 364.6 (96.3) 364.6 (96.3) 25% load with fan − L/hr (gal/hr) 214.1 (56.6) 214.1 (56.6) 214.1 (56.6) Cooling System  Radiator air flow restriction (system) − kPa (in. water) 0.12 (0.48) 0.12 (0.48) Radiator air flow − m³/min (cfm) 2922 (103189) 2922 (103189) 2922 (103189) Engine coolant capacity − L (gal) 233.2 (61.6) 233.2 (61.6) Radiator coolant capacity − L (gal) 202.0 (53.4) 202.0 (53.4) 202.0 (53.4) 17.0 (56.6) Inlet Air  Combustion air inlet flow rate − m³/min (cfm) 230.2 (8127.0) 230.2 (8127.0) Inlet Air  Exhaust System  Exhaust stack gas temperature − °C (°F) 481.7 (899.1) 481.7 (899.1) Exhaust gas flow rate − m³/min (cfm) 598.4 (21128.8) 598.4 (21128.8) Exhaust system backpressure (maximum allowable) − kPa (in. water) 6.7 (27.0) 6.7 (27.0) Heat rejection to jacket water − kW (Btu/min) 822 (46728) 822 (46728) Heat rejection to aftercooler − kW (Btu/min) 844 (48019) 844 (48019) 844 (48019) Heat rejection to aftercooler − kW (Btu/min) 101 (5744) 101 (5744) Emissions* (Nominal) - Full Load NO, mg/Nm³ (g/hp-h) 170.9 (3.74) 170.9 (3.74) CO mg/Nm³ (g/hp-h) 35.7 (0.09) 36.6 (0.09) 36.6 (0.09) Rms/sions* (Potential Site Variation) - Full Load NO, mg/Nm³ (g/hp-h) 35.7 (0.09) 35.7 (0.09) Emissions* (Potential Site Variation) - Full Load NO, mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18) CO mg/Nm³ (g/hp-h) 48.7 (0.12) 48.7 (0.12) 48.7 (0.12)	Frequency	50 Hz		50 Hz		
Finissions	Gen set power rating with fan	2400 ekW		2400 ekW		
Performance number	Gen set power rating with fan @ 0.8 power factor	3000 kVA		3000 kVA		
Fuel Consumption   100% load with fan - L/hr (gal/hr)   657.9 (173.8)   657.9 (173.8)   657.9 (132.0)   499.5 (132.0)   499.5 (132.0)   50% load with fan - L/hr (gal/hr)   364.6 (96.3)   364.6 (96.3)   364.6 (96.3)   25% load with fan - L/hr (gal/hr)   214.1 (56.6)   214.1 (56.6)   200.0   25% load with fan - L/hr (gal/hr)   214.1 (56.6)   214.1 (56.6)   200.0   25% load with fan - L/hr (gal/hr)   214.1 (56.6)   214.1 (56.6)   200.0   25% load with fan - L/hr (gal/hr)   214.1 (56.6)   214.1 (56.6)   200.0   200	Emissions	Tier 2 (EPA ESE)		Tier 2 (EPA ESE)		
100% load with fan - L/hr (gal/hr)	Performance number	EM6	729-01	EM6731-01		
75% load with fan – L/hr (gal/hr) 499.5 (132.0) 499.5 (132.0) 50% load with fan – L/hr (gal/hr) 364.6 (96.3) 364.6 (96.9) 36.6 (96.9) 36.6 (96.9) 36.6 (96.9) 36.6 (96.9) 36.6 (96.9) 36.7 (97.4) 36.7 (	Fuel Consumption					
50% load with fan – L/hr (gal/hr)       364.6       (96.3)       364.6       (96.3)         25% load with fan – L/hr (gal/hr)       214.1       (56.6)       214.1       (56.6)         Cooling System         Radiator air flow restriction (system) – kPa (in. water)       0.12       (0.48)       0.12       (0.48)         Radiator air flow – m³/min (cfm)       2922       (103189)       2922       (103189)         Engine coolant capacity – L (gal)       233.2       (61.6)       233.2       (61.6)         Radiator coolant capacity – L (gal)       435.2       (115.0)       435.2       (115.0)         Inlet Air         Combustion air inlet flow rate – m³/min (cfm)       230.2       (8127.0)       230.2       (8127.0)         Exhaust System         Exhaust spast flow rate – m³/min (cfm)       598.4       (21128.8)       598.4       (21128.8)         Exhaust system backpressure (maximum allowable) – kPa (in. water)       6.7       (27.0)       6.7       (27.0)         Heat rejection to jacket water – kW (Btu/min)       822       (46728)       822       (46728)         Heat rejection to affercooler – kW (Btu/min)       844       (48019)	100% load with fan – L/hr (gal/hr)	657.9	(173.8)	657.9	(173.8)	
25% load with fan - L/hr (gal/hr)	75% load with fan – L/hr (gal/hr)	499.5	(132.0)	499.5	(132.0)	
Cooling System           Radiator air flow restriction (system) – kPa (in. water)         0.12 (0.48)         0.12 (0.48)           Radiator air flow – m³/min (cfm)         2922 (103189)         2922 (103189)           Engine coolant capacity – L (gal)         233.2 (61.6)         233.2 (61.6)           Radiator coolant capacity – L (gal)         202.0 (53.4)         202.0 (53.4)           Total coolant capacity – L (gal)         435.2 (115.0)         435.2 (115.0)           Inlet Air           Combustion air inlet flow rate – m³/min (cfm)         230.2 (8127.0)         230.2 (8127.0)           Exhaust System           Exhaust stack gas temperature – °C (°F)         481.7 (899.1)         481.7 (899.1)           Exhaust system backpressure (maximum allowable) – kPa (in. water)         598.4 (21128.8)         598.4 (21128.8)           Exhaust system backpressure (maximum allowable) – kPa (in. water)         6.7 (27.0)         6.7 (27.0)           Heat rejection to jacket water – kW (Btu/min)         822 (46728)         822 (46728)           Heat rejection to aftercooler – kW (Btu/min)         824 (48019)         844 (48019)           Heat rejection to atmosphere from engine – kW (Btu/min)         157 (8907)         157 (8907)           Heat rejection from alternator – kW (Btu/min)         10 (5744)         101 (5744)	50% load with fan – L/hr (gal/hr)	364.6	(96.3)	364.6	(96.3)	
Radiator air flow restriction (system) – kPa (in. water) 0.12 (0.48) 0.12 (0.48) Radiator air flow – m³/min (cfm) 2922 (103189) 2922 (103189) Engine coolant capacity – L (gal) 233.2 (61.6) 233.2 (61.6) Radiator coolant capacity – L (gal) 202.0 (53.4) 202.0 (53.4) Total coolant capacity – L (gal) 435.2 (115.0) 435.2 (115.0)  Inlet Air  Combustion air inlet flow rate – m³/min (cfm) 230.2 (8127.0) 230.2 (8127.0)  Exhaust System  Exhaust stack gas temperature – °C (°F) 481.7 (899.1) 481.7 (899.1) Exhaust gas flow rate – m³/min (cfm) 598.4 (21128.8) 598.4 (21128.8) Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min) 822 (46728) 822 (46728) Heat rejection to aftercooler – kW (Btu/min) 844 (48019) 844 (48019) Heat rejection to atmosphere from engine – kW (Btu/min) 101 (5744) 101 (5744)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1709.9 (3.74) 1709.9 (3.74) Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18) CO mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18) CO mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76) HC mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)	25% load with fan – L/hr (gal/hr)	214.1	(56.6)	214.1	(56.6)	
Radiator air flow — m³/min (cfm)         2922 (103189)         2922 (103189)         2922 (103189)           Engine coolant capacity — L (gal)         233.2 (61.6)         233.2 (61.6)         233.2 (61.6)           Radiator coolant capacity — L (gal)         202.0 (53.4)         202.0 (53.4)         202.0 (53.4)           Total coolant capacity — L (gal)         435.2 (115.0)         435.2 (115.0)         435.2 (115.0)           Inlet Air           Combustion air inlet flow rate — m³/min (cfm)         230.2 (8127.0)         230.2 (8127.0)         230.2 (8127.0)           Exhaust System           Exhaust sack gas temperature — °C (°F)         481.7 (899.1)         481.7 (899.1)         481.7 (899.1)           Exhaust system backpressure (maximum allowable) — kPa (in. water)         6.7 (27.0)         6.7 (27.0)         6.7 (27.0)           Heat Rejection           Heat rejection to jacket water — kW (Btu/min)         822 (46728)         822 (46728)         822 (46728)           Heat rejection to aftercooler — kW (Btu/min)         844 (48019)         844 (48019)         844 (48019)           Heat rejection to atmosphere from engine — kW (Btu/min)         157 (8907)         157 (8907)         (8907)           Heat rejection from alternator — kW (Btu/min)         10 (5744)         101 (5744)         (5744)	Cooling System					
Engine coolant capacity – L (gal) 233.2 (61.6) 233.2 (61.6) Radiator coolant capacity – L (gal) 202.0 (53.4) 202.0 (53.4) 202.0 (53.4) Total coolant capacity – L (gal) 435.2 (115.0) 435.2 (115.0) Inlet Air  Combustion air inlet flow rate – m³/min (cfm) 230.2 (8127.0) 230.2 (8127.0) Exhaust System  Exhaust System  Exhaust gas flow rate – m³/min (cfm) 598.4 (21128.8) 598.4 (21128.8) Exhaust system backpressure (maximum allowable) – kPa (in. water) 6.7 (27.0) 6.7 (27.0) + Reat rejection to jacket water – kW (Btu/min) 822 (46728) 822 (46728) + Reat rejection to exhaust (total) – kW (Btu/min) 844 (48019) 844 (48019) + Reat rejection to aftercooler – kW (Btu/min) 844 (48019) 844 (48019) + Reat rejection to atmosphere from engine – kW (Btu/min) 101 (5744) 101 (5744) + Remissions* (Nominal) - Full Load NO <sub>x</sub> mg/Nm³ (g/hp-h) 1709.9 (3.74) 1709.9 (3.74) + Remissions* (Q.09) 35.7 (0.09) 85.7 (0.09) Emissions* (Potential Site Variation) - Full Load NO <sub>x</sub> mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18) CO mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18) CO mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76) HC mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76) HC mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)	Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	
Radiator coolant capacity — L (gal) 202.0 (53.4) 202.0 (53.4)  Total coolant capacity — L (gal) 435.2 (115.0) 435.2 (115.0)  Inlet Air  Combustion air inlet flow rate — m³/min (cfm) 230.2 (8127.0) 230.2 (8127.0)  Exhaust System  Exhaust system Exhaust system backpressure (maximum allowable) — kPa (in. water)  Heat Rejection  Heat rejection to jacket water — kW (Btu/min) 822 (46728) 822 (46728)  Heat rejection to exhaust (total) — kW (Btu/min) 2730 (155243) 2730 (155243)  Heat rejection to aftercooler — kW (Btu/min) 844 (48019) 844 (48019)  Heat rejection to atmosphere from engine — kW (Btu/min) 101 (5744) 101 (5744)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1709.9 (3.74) 1709.9 (3.74)  Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 35.7 (0.09) 35.7 (0.09)  Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18)  CO mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)  HC mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)  HC mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)	Radiator air flow – m³/min (cfm)	2922	(103189)	2922	(103189)	
Total coolant capacity – L (gal)  Inlet Air  Combustion air inlet flow rate – m³/min (cfm)  Exhaust System  Exhaust stack gas temperature – °C (°F)  Exhaust gas flow rate – m³/min (cfm)  Exhaust system  Exhaust system backpressure (maximum allowable)  - kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Hoat rejection from alternator – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Hoat rejection to affectooler	Engine coolant capacity – L (gal)	233.2	(61.6)	233.2	(61.6)	
Combustion air inlet flow rate - m³/min (cfm)   230.2 (8127.0)   230.2 (8127.0)	Radiator coolant capacity – L (gal)	202.0	(53.4)	202.0	(53.4)	
Combustion air inlet flow rate — m³/min (cfm)         230.2         (8127.0)         230.2         (8127.0)           Exhaust System         Exhaust stack gas temperature — °C (°F)         481.7         (899.1)         481.7         (899.1)           Exhaust system backpressure (maximum allowable) — kPa (in. water)         598.4         (21128.8)         598.4         (21128.8)           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)         822         (46728)         822         (46728)           Heat rejection to exhaust (total) — kW (Btu/min)         2730         (155243)         2730         (155243)           Heat rejection to aftercooler — kW (Btu/min)         844         (48019)         844         (48019)           Heat rejection from alternator — kW (Btu/min)         157         (8907)         157         (8907)           Heat rejection from alternator — kW (Btu/min)         101         (5744)         101         (5744)           Heat rejection from alternator — kW (Btu/min)         101         (5744)         101         (5744)           Heat rejection from alternator — kW (Btu/min)         101         (5744)         101         (5744)	Total coolant capacity – L (gal)	435.2	(115.0)	435.2	(115.0)	
Exhaust System         Exhaust stack gas temperature – °C (°F)       481.7 (899.1)       481.7 (899.1)       481.7 (899.1)         Exhaust gas flow rate – m³/min (cfm)       598.4 (21128.8)       598.4 (21128.8)         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)       822 (46728)       822 (46728)         Heat rejection to exhaust (total) – kW (Btu/min)       2730 (155243)       2730 (155243)         Heat rejection to affercooler – kW (Btu/min)       844 (48019)       844 (48019)         Heat rejection to atmosphere from engine – kW (Btu/min)       157 (8907)       157 (8907)         Heat rejection from alternator – kW (Btu/min)       101 (5744)       101 (5744)         Heat rejection from alternator – kW (Btu/min)       101 (5744)       101 (5744)         Emissions* (Nominal) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1709.9 (3.74) 1709.9 (3.74)       1709.9 (3.74)         C mg/Nm³ (g/hp-h)       36.6 (0.09) 35.7 (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18) 1915.1 (4.18)         CO mg/Nm³ (g/hp-h) <t< td=""><td>Inlet Air</td><td></td><td></td><td></td><td></td></t<>	Inlet Air					
Exhaust stack gas temperature – °C (°F)	Combustion air inlet flow rate – m³/min (cfm)	230.2	(8127.0)	230.2	(8127.0)	
Exhaust gas flow rate — m³/min (cfm) 598.4 (21128.8) 598.4 (21128.8) Exhaust system backpressure (maximum allowable) 6.7 (27.0) 6.7 (27.0)  Heat Rejection  Heat rejection to jacket water — kW (Btu/min) 822 (46728) 822 (46728)  Heat rejection to exhaust (total) — kW (Btu/min) 2730 (155243) 2730 (155243)  Heat rejection to aftercooler — kW (Btu/min) 844 (48019) 844 (48019)  Heat rejection to atmosphere from engine — kW (Btu/min) 157 (8907) 157 (8907)  Heat rejection from alternator — kW (Btu/min) 101 (5744) 101 (5744)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1709.9 (3.74) 1709.9 (3.74)  CO mg/Nm³ (g/hp-h) 36.6 (0.09) 36.6 (0.09)  PM mg/Nm³ (g/hp-h) 35.7 (0.09) 35.7 (0.09)  Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18)  CO mg/Nm³ (g/hp-h) 48.7 (0.12) 48.7 (0.12)	Exhaust System					
Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Hou (5744)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)  Ad5.8 (0.98)  HC mg/Nm³ (g/hp-h)  Boson definition of the component of the co	Exhaust stack gas temperature – °C (°F)	481.7	(899.1)	481.7	(899.1)	
Heat Rejection	Exhaust gas flow rate – m³/min (cfm)	598 4	(21128.8)	E00 /	(04400.0)	
Heat rejection to jacket water – kW (Btu/min)       822 (46728)       822 (46728)         Heat rejection to exhaust (total) – kW (Btu/min)       2730 (155243)       2730 (155243)         Heat rejection to aftercooler – kW (Btu/min)       844 (48019)       844 (48019)         Heat rejection to atmosphere from engine – kW (Btu/min)       157 (8907)       157 (8907)         Heat rejection from alternator – kW (Btu/min)       101 (5744)       101 (5744)         Emissions* (Nominal) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1709.9 (3.74)       1709.9 (3.74)         CO mg/Nm³ (g/hp-h)       445.8 (0.98)       445.8 (0.98)         HC mg/Nm³ (g/hp-h)       36.6 (0.09)       36.6 (0.09)         PM mg/Nm³ (g/hp-h)       35.7 (0.09)       35.7 (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18) 1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76) 802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12) 48.7 (0.12)		000	(21120.0)	390.4	(21128.8)	
Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  1709.9 (3.74)  1709.9 (3.74)  CO mg/Nm³ (g/hp-h)  445.8 (0.98)  HC mg/Nm³ (g/hp-h)  36.6 (0.09)  BM mg/Nm³ (g/hp-h)  35.7 (0.09)  Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  1915.1 (4.18)  CO mg/Nm³ (g/hp-h)  802.4 (1.76)  B02.4 (1.76)  HC mg/Nm³ (g/hp-h)  48.7 (0.12)  48.7 (0.12)	Exhaust system backpressure (maximum allowable)		, ,		, ,	
Heat rejection to aftercooler – kW (Btu/min)       844 (48019)       844 (48019)         Heat rejection to atmosphere from engine – kW (Btu/min)       157 (8907)       157 (8907)         Heat rejection from alternator – kW (Btu/min)       101 (5744)       101 (5744)         Emissions* (Nominal) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1709.9 (3.74)       1709.9 (3.74)         CO mg/Nm³ (g/hp-h)       445.8 (0.98)       445.8 (0.98)         HC mg/Nm³ (g/hp-h)       36.6 (0.09)       36.6 (0.09)         PM mg/Nm³ (g/hp-h)       35.7 (0.09)       35.7 (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18)       1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76)       802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12)       48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)		, ,		, ,	
Heat rejection to atmosphere from engine -   157 (8907)   157 (8907)   Heat rejection from alternator - kW (Btu/min)   101 (5744)   101 (5744)   Emissions* (Nominal) - Full Load   1709.9 (3.74)   1709.9 (	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection	6.7	(27.0)	6.7	(27.0)	
kW (Btu/min)       157 (8907)       157 (8907)         Heat rejection from alternator – kW (Btu/min)       101 (5744)       101 (5744)         Emissions* (Nominal) - Full Load       1709.9 (3.74)       1709.9 (3.74)         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1709.9 (3.74)       1709.9 (3.74)         CO mg/Nm³ (g/hp-h)       445.8 (0.98)       445.8 (0.98)         HC mg/Nm³ (g/hp-h)       36.6 (0.09)       36.6 (0.09)         PM mg/Nm³ (g/hp-h)       35.7 (0.09)       35.7 (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18) 1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76) 802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12) 48.7 (0.12)	Exhaust system backpressure (maximum allowable)  – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)	6.7 822	(27.0)	6.7 822	(27.0)	
Emissions* (Nominal) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1709.9       (3.74)       1709.9       (3.74)         CO mg/Nm³ (g/hp-h)       445.8       (0.98)       445.8       (0.98)         HC mg/Nm³ (g/hp-h)       36.6       (0.09)       36.6       (0.09)         PM mg/Nm³ (g/hp-h)       35.7       (0.09)       35.7       (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1       (4.18)       1915.1       (4.18)         CO mg/Nm³ (g/hp-h)       802.4       (1.76)       802.4       (1.76)         HC mg/Nm³ (g/hp-h)       48.7       (0.12)       48.7       (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)	6.7 822 2730	(27.0) (46728) (155243)	6.7 822 2730	(27.0) (46728) (155243)	
NOx mg/Nm³ (g/hp-h)       1709.9       (3.74)       1709.9       (3.74)         CO mg/Nm³ (g/hp-h)       445.8       (0.98)       445.8       (0.98)         HC mg/Nm³ (g/hp-h)       36.6       (0.09)       36.6       (0.09)         PM mg/Nm³ (g/hp-h)       35.7       (0.09)       35.7       (0.09)         Emissions* (Potential Site Variation) - Full Load         NOx mg/Nm³ (g/hp-h)       1915.1       (4.18)       1915.1       (4.18)         CO mg/Nm³ (g/hp-h)       802.4       (1.76)       802.4       (1.76)         HC mg/Nm³ (g/hp-h)       48.7       (0.12)       48.7       (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine –	6.7 822 2730 844	(27.0) (46728) (155243) (48019)	822 2730 844	(27.0) (46728) (155243) (48019)	
CO mg/Nm³ (g/hp-h)       445.8       (0.98)       445.8       (0.98)         HC mg/Nm³ (g/hp-h)       36.6       (0.09)       36.6       (0.09)         PM mg/Nm³ (g/hp-h)       35.7       (0.09)       35.7       (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1       (4.18)       1915.1       (4.18)         CO mg/Nm³ (g/hp-h)       802.4       (1.76)       802.4       (1.76)         HC mg/Nm³ (g/hp-h)       48.7       (0.12)       48.7       (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)	822 2730 844 157	(27.0) (46728) (155243) (48019) (8907)	822 2730 844 157	(27.0) (46728) (155243) (48019) (8907)	
HC mg/Nm³ (g/hp-h) 36.6 (0.09) 36.6 (0.09)  PM mg/Nm³ (g/hp-h) 35.7 (0.09) 35.7 (0.09)  Emissions* (Potential Site Variation) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h) 1915.1 (4.18) 1915.1 (4.18)  CO mg/Nm³ (g/hp-h) 802.4 (1.76) 802.4 (1.76)  HC mg/Nm³ (g/hp-h) 48.7 (0.12) 48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)	822 2730 844 157	(27.0) (46728) (155243) (48019) (8907)	822 2730 844 157	(27.0) (46728) (155243) (48019) (8907)	
PM mg/Nm³ (g/hp-h)       35.7 (0.09)       35.7 (0.09)         Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18)       1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76)       802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12)       48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load	822 2730 844 157	(27.0) (46728) (155243) (48019) (8907) (5744)	6.7 822 2730 844 157 101	(27.0) (46728) (155243) (48019) (8907) (5744)	
Emissions* (Potential Site Variation) - Full Load         NO <sub>x</sub> mg/Nm³ (g/hp-h)       1915.1 (4.18) 1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76) 802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12) 48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)	6.7 822 2730 844 157 101	(27.0) (46728) (155243) (48019) (8907) (5744)	6.7 822 2730 844 157 101 1709.9	(27.0) (46728) (155243) (48019) (8907) (5744)	
NOx mg/Nm³ (g/hp-h)       1915.1 (4.18)       1915.1 (4.18)         CO mg/Nm³ (g/hp-h)       802.4 (1.76)       802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12)       48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)	6.7 822 2730 844 157 101 1709.9 445.8	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98)	6.7 822 2730 844 157 101 1709.9 445.8	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98)	
CO mg/Nm³ (g/hp-h)       802.4 (1.76)       802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12)       48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)	822 2730 844 157 101 1709.9 445.8 36.6	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98) (0.09)	6.7 822 2730 844 157 101 1709.9 445.8 36.6	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98) (0.09)	
CO mg/Nm³ (g/hp-h)       802.4 (1.76)       802.4 (1.76)         HC mg/Nm³ (g/hp-h)       48.7 (0.12)       48.7 (0.12)	Exhaust system backpressure (maximum allowable) – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)  PM mg/Nm³ (g/hp-h)	6.7 822 2730 844 157 101 1709.9 445.8 36.6 35.7	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98) (0.09)	6.7 822 2730 844 157 101 1709.9 445.8 36.6	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98) (0.09)	
HC mg/Nm³ (g/hp-h) 48.7 (0.12) 48.7 (0.12)	Exhaust system backpressure (maximum allowable)  – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)  PM mg/Nm³ (g/hp-h)  Emissions* (Potential Site Variation) - Full Lo	6.7  822  2730  844  157  101  1709.9  445.8  36.6  35.7	(27.0) (46728) (155243) (48019) (8907) (5744) (3.74) (0.98) (0.09) (0.09)	6.7 822 2730 844 157 101 1709.9 445.8 36.6 35.7	(27.0) (46728) (155243) (48019) (8907) (5744) (0.98) (0.09) (0.09)	
	Exhaust system backpressure (maximum allowable)  – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)  PM mg/Nm³ (g/hp-h)  Emissions* (Potential Site Variation) - Full Lo  NO <sub>x</sub> mg/Nm³ (g/hp-h)	822 2730 844 157 101 1709.9 445.8 36.6 35.7 ad	(27.0) (46728) (155243) (48019) (8907) (5744) (0.98) (0.09) (0.09) (4.18)	6.7 822 2730 844 157 101 1709.9 445.8 36.6 35.7	(27.0) (46728) (155243) (48019) (8907) (5744) (0.98) (0.09) (0.09) (4.18)	
	Exhaust system backpressure (maximum allowable)  – kPa (in. water)  Heat Rejection  Heat rejection to jacket water – kW (Btu/min)  Heat rejection to exhaust (total) – kW (Btu/min)  Heat rejection to aftercooler – kW (Btu/min)  Heat rejection to atmosphere from engine – kW (Btu/min)  Heat rejection from alternator – kW (Btu/min)  Emissions* (Nominal) - Full Load  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)  HC mg/Nm³ (g/hp-h)  Emissions* (Potential Site Variation) - Full Lo  NO <sub>x</sub> mg/Nm³ (g/hp-h)  CO mg/Nm³ (g/hp-h)	6.7  822  2730  844  157  101  1709.9  445.8  36.6  35.7  ad  1915.1  802.4	(27.0)  (46728) (155243) (48019) (8907) (5744)  (0.98) (0.09) (0.09)  (4.18) (1.76)	6.7 822 2730 844 157 101 1709.9 445.8 36.6 35.7 1915.1 802.4	(27.0) (46728) (155243) (48019) (8907) (5744) (0.98) (0.09) (0.09) (4.18) (1.76)	

 $<sup>^*</sup>mg/Nm^3$  levels are corrected to 5% O2. Contact your local Cat dealer for further information.

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## **Weights and Dimensions**



Rating	Dim "A"	Dim "B"	Dim "C"	Dry Weight
kVA	mm (in)	mm (in)	mm (in)	kg (lb)
3000	8513 (335.1)	2640 (104.0)	3342 (131.6)	23 000 (50,706)

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 rated ekW. 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 rated ekW. Typical peak demand up to 100% of rated ekW for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

## **Applicable Codes and Standards**

AS 1359, 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, GB/T 2820.

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

## **Data Center Applications**

- 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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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.