

**Standby & Prime: 60Hz; 220V, 240V, 380V, 440V & 480V**



*Image shown might not reflect actual configuration*

|                       |                                           |
|-----------------------|-------------------------------------------|
| Engine Model          | Cat® C15 ACERT™ In-line 6, 4-cycle diesel |
| Bore x Stroke         | 137 mm x 171 mm (5.4 in x 6.8 in)         |
| Displacement          | 15.2 L (928 in³)                          |
| Compression Ratio     | 16.1:1                                    |
| Aspiration            | Turbocharged Air-to-Air Aftercooled       |
| Fuel Injection System | MEUI                                      |
| Governor              | Electronic ADEM™ A4                       |

| Model    | Standby          | Prime            | Emission Strategy       |
|----------|------------------|------------------|-------------------------|
| DE500SE0 | 625 kVA, 500 ekW | 569 kVA, 455 ekW | Non-Certified Emissions |

## PACKAGE PERFORMANCE

| Performance                                      | Standby                  | Prime                    |
|--------------------------------------------------|--------------------------|--------------------------|
| Frequency                                        | 60 Hz                    | 60 Hz                    |
| Genset Power Rating                              | 625 kVA                  | 569 kVA                  |
| Gen set power rating with fan @ 0.8 power factor | 500 ekW                  | 455 ekW                  |
| Fuelling strategy                                | Non-Certified Emissions  | Non-Certified Emissions  |
| Performance Number                               | DM8165                   | DM8164                   |
| Fuel Consumption                                 |                          |                          |
| 100% Load with Fan                               | 123.1 L/hr, 32.5 gal/hr  | 113.6 L/hr, 30.0 gal/hr  |
| 75% Load with Fan                                | 95.2 L/hr, 25.1 gal/hr   | 87.5 L/hr, 23.1 gal/hr   |
| 50% Load with Fan                                | 67.6 L/hr, 17.9 gal/hr   | 62.5 L/hr, 16.5 gal/hr   |
| 25% Load with Fan                                | 40.4 L/hr, 10.7 gal/hr   | 37.9 L/hr, 10.0 gal/hr   |
| Cooling System¹                                  |                          |                          |
| Radiator air flow restriction (system)           | 0.12 kPa, 0.48 in. Water | 0.12 kPa, 0.48 in. Water |
| Radiator air flow                                | 659 m³/min, 23272 cfm    | 659 m³/min, 23272 cfm    |
| Engine coolant capacity                          | 20.8 L, 5.5 gal          | 20.8 L, 5.5 gal          |
| Radiator coolant capacity                        | 37 L, 9.7 gal            | 37 L, 9.7 gal            |
| Total coolant capacity                           | 57.8 L, 15.2 gal         | 57.8 L, 15.2 gal         |
| Inlet Air                                        |                          |                          |
| Combustion air inlet flow rate                   | 37.9 m³/min, 1337.4 cfm  | 35.2 m³/min, 1241.5 cfm  |
| Max. Allowable Combustion Air Inlet Temp         | 47 °C, 117 °F            | 43 °C, 110 °F            |
| Exhaust System                                   |                          |                          |
| Exhaust stack gas temperature                    | 510.3 °C, 950.6 °F       | 505.4 °C, 941.7 °F       |
| Exhaust gas flow rate                            | 102.7 m³/min, 3627.4 cfm | 94.2 m³/min, 3327.5 cfm  |
| Exhaust system backpressure (maximum allowable)  | 10.0 kPa, 40.0 in. water | 10.0 kPa, 40.0 in. water |
| Heat Rejection                                   |                          |                          |
| Heat rejection to jacket water                   | 185 kW, 10501 Btu/min    | 180 kW, 10224 Btu/min    |
| Heat rejection to exhaust (total)                | 477 kW, 27109 Btu/min    | 436 kW, 24783 Btu/min    |
| Heat rejection to aftercooler                    | 108 kW, 6125 Btu/min     | 91 kW, 5186 Btu/min      |
| Heat rejection to atmosphere from engine         | 13 kW, 767 Btu/min       | 22 kW, 1244 Btu/min      |
| Heat Rejection to Atmosphere from Generator      | 26 kW, 1479 Btu/min      | 22 kW, 1251 Btu/min      |

| Emissions (Nominal) <sup>2</sup>            | Standby                             |                        |                      | Prime                      |                      |
|---------------------------------------------|-------------------------------------|------------------------|----------------------|----------------------------|----------------------|
| NOx                                         | 3377.5 mg/Nm³, 6.6 g/hp-hr          |                        |                      | 3329.0 mg/Nm³, 6.6 g/hp-hr |                      |
| CO                                          | 197.8 mg/Nm³, 0.4 g/hp-hr           |                        |                      | 186.1 mg/Nm³, 0.4 g/hp-hr  |                      |
| HC                                          | 3.0 mg/Nm³, 0.0 g/hp-hr             |                        |                      | 2.8 mg/Nm³, 0.0 g/hp-hr    |                      |
| PM                                          | 9.0 mg/Nm³, 0.0 g/hp-hr             |                        |                      | 11.1 mg/Nm³, 0.0 g/hp-hr   |                      |
| Alternator <sup>3</sup>                     |                                     |                        |                      |                            |                      |
| Voltages                                    | 220V                                | 240V                   | 380V                 | 440V                       | 480V                 |
| Motor Starting Capability @ 30% Voltage Dip | 1305 skVA                           | 1553 skVA              | 971 skVA             | 1305 skVA                  | 1553 skVA            |
| Current                                     | SB: 1624A<br>PP: 1476A              | SB: 1503A<br>PP: 1368A | SB: 824A<br>PP: 751A | SB: 812A<br>PP: 738A       | SB: 752A<br>PP: 684A |
| Frame Size                                  | A2985L4                             | A2985L4                | A2985L4              | A2985L4                    | A2985L4              |
| Excitation                                  | SE                                  | SE                     | SE                   | SE                         | SE                   |
| Temperature Rise                            | SB:163°C, 325°F<br>PP: 125°C, 257°F |                        |                      |                            |                      |

SB: Standby PP: Prime Power

## DEFINITIONS AND CONDITIONS

<sup>1</sup> For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

<sup>2</sup> Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NO<sub>x</sub>. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 BTU/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

<sup>3</sup> UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.

## 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, 2006/95/EC, 2006/42/EC, 2004/108/EC.

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

**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.

**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.

**Ratings** are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

**Fuel Rates** fuel Consumption reported in accordance with ISO3046-1.

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