

## Standby & Prime: 60Hz & 50Hz



Image shown might not reflect actual configuration

|                       |                                     |
|-----------------------|-------------------------------------|
| Engine Model          | Cat® C2.2 In-line 4, 4-cycle diesel |
| Bore x Stroke         | 84mm x 100mm (3.3in x 3.9in)        |
| Displacement          | 2.2 L (135.2 in <sup>3</sup> )      |
| Compression Ratio     | 23.3:1                              |
| Aspiration            | Naturally Aspirated                 |
| Fuel Injection System | Inline                              |
| Governor              | Mechanical                          |

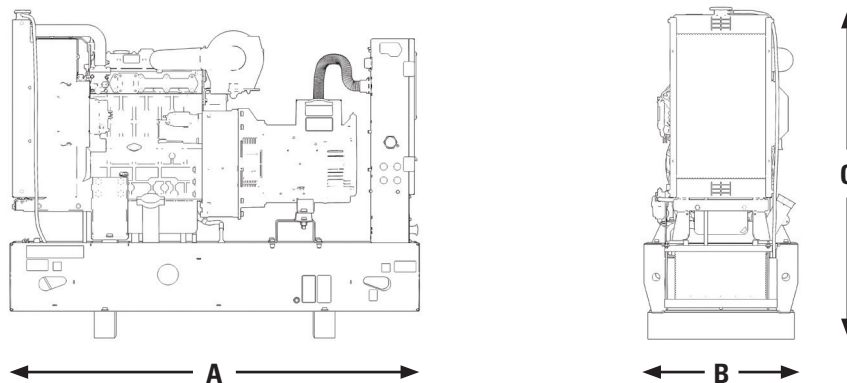
| Model   | Standby  |          | Prime    |          | Emission Strategy |
|---------|----------|----------|----------|----------|-------------------|
|         | 50 Hz    | 60 Hz    | 50 Hz    | 60 Hz    |                   |
| DE16E3S | 16.5 kVA | 19.4 kVA | 15.0 kVA | 17.6 kVA | EU IIIA           |

## PACKAGE PERFORMANCE

| Performance   | Standby     |             | Prime      |             |
|---|-------------|-------------|------------|-------------|
|   | 50 Hz       | 60 Hz       | 50 Hz      | 60 Hz       |
| Frequency   | 50 Hz       | 60 Hz       | 50 Hz      | 60 Hz       |
| Genset Power Rating   | 16.5 kVA    | 19.4 kVA    | 15.0 kVA   | 17.6 kVA    |
| Genset power rating with fan @ 0.8 power factor                     | 16.5 ekW    | 19.4 ekW    | 15.0 ekW   | 17.6 ekW    |
| Emissions   | EU IIIA     |             |            |             |
| <b>Fuel Consumption</b>   |             |             |            |             |
| 110% load with fan, L/hr (gal/hr)                                   | NA          |             | 5.5 (1.5)  | 6.3 (1.7)   |
| 100% load with fan, L/hr (gal/hr)                                   | 5.5 (1.5)   | 6.3 (1.7)   | 4.9 (1.3)  | 5.7 (1.5)   |
| 75% load with fan, L/hr (gal/hr)                                    | 4.0 (1.1)   | 4.8 (1.3)   | 3.7 (1.0)  | 4.4 (1.2)   |
| 50% load with fan, L/hr (gal/hr)                                    | 2.9 (0.8)   | 3.5 (0.9)   | 2.7 (0.7)  | 3.3 (0.9)   |
| <b>Cooling System<sup>1</sup></b>                                   |             |             |            |             |
| Radiator air flow restriction (system), kPa (in. Water)             | 125 (0.5)   | 125 (0.5)   | 125 (0.5)  | 125 (0.5)   |
| Radiator air flow, m <sup>3</sup> /min (cfm)                        | 33 (1165)   | 41.4 (1462) | 33 (1165)  | 41.4 (1462) |
| Total coolant capacity, L (gal)                                     | 6.5 (1.7)   | 6.5 (1.7)   | 6.5 (1.7)  | 6.5 (1.7)   |
| <b>Inlet Air</b>  |             |             |            |             |
| Combustion air inlet flow rate, m <sup>3</sup> /min (cfm)           | 1.5 (51)    | 1.7 (61)    | 1.5 (51)   | 1.7 (61)    |
| Max. Allowable Combustion Air Inlet Temp, °C                        | 50          | 50          | 50         | 50          |
| <b>Exhaust System</b>   |             |             |            |             |
| Exhaust stack gas temperature, °C (°F)                              | 505 (941)   | 510 (950)   | 445 (833)  | 440 (824)   |
| Exhaust gas flow rate, m <sup>3</sup> /min (cfm)                    | 3.9 (139)   | 4.8 (168)   | 3.6 (129)  | 4.3 (153)   |
| Exhaust system backpressure (maximum allowable), kPa (in. Hg)       | 10.2 (3)    | 10.2 (3)    | 10.2 (3)   | 10.2 (3)    |
| <b>Heat Rejection</b>   |             |             |            |             |
| Heat rejection to jacket water, kW (Btu/min)                        | 19.6 (1115) | 22.2 (1262) | 17.0 (967) | 19.9 (1132) |
| Heat rejection to atmosphere from engine & alternator, kW (Btu/min) | 6.9 (392)   | 7.7 (438)   | 5.4 (307)  | 6.4 (364)   |

| Alternator <sup>3</sup>                     | 50 Hz    |         |           | 60 Hz     |          |
|---|----------|---------|-----------|-----------|----------|
| Voltages                                    | 240V     | 230V    | 220V      | 220/110V  | 240/120V |
| Motor starting capability @ 30% Voltage Dip | 41 kVA   | 39 kVA  | 37 kVA    | 32 kVA    | 37 kVA   |
| Current                                     | 25 amps  | 26 amps | 27.3 amps | 57.7 amps | 0 amps   |
| Frame Size                                  | LCB1114M |         |           |           |          |
| Excitation                                  | SE       |         |           |           |          |
| Temperature Rise                            | 105°C    |         |           |           |          |

## WEIGHTS & DIMENSIONS



**Note:** General configuration not to be used for installation. See general dimension drawings for detail.

| Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|-----------------|-----------------|-----------------|--------------------|
| 1500 (59.1)     | 620 (24.4)      | 1115 (43.9)     | 447 (985)          |

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

### 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, NOx. 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.

## LET'S DO THE WORK.™

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