

# Cat® C18

## Diesel Generator Sets



**Standby & Prime: 60Hz**



*Image shown might not reflect actual configuration*

|                       |   |
|-----------------------|---|
| Engine Model          | Cat® C18 In-line 6, 4-cycle Diesel      |
| Bore x Stroke         | 145mm x 183mm (5.7in x 7.2in)           |
| Displacement          | 18.1 L ( 1106 in³)                      |
| Compression Ratio     | 14.5:1                                  |
| Aspiration            | Turbocharged Air-to-Air Aftercooled     |
| Fuel Injection System | MEUI                                    |
| Governor              | Electronic ADEM™ A4 - G3 Class* capable |

| Model   | Standby          | Prime            | Emission Strategy |
|---------|------------------|------------------|-------------------|
| DE660E0 | 660 kVA, 528 ekW | 600 kVA, 480 ekW | Low BSFC          |

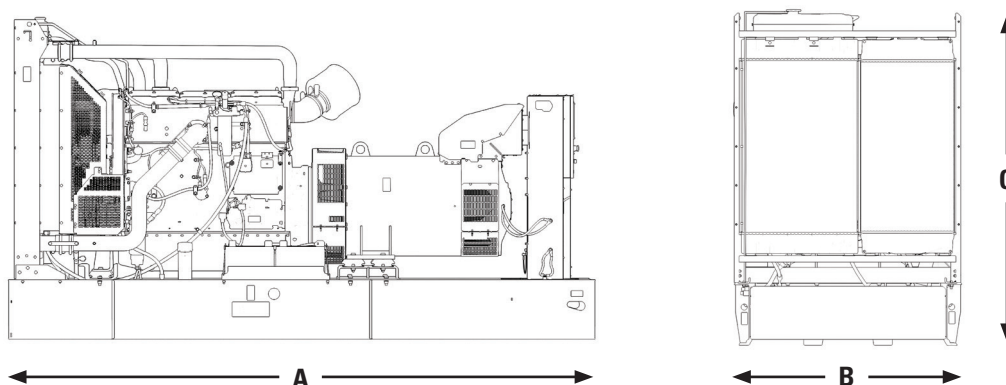
### PACKAGE PERFORMANCE

| Performance   | Standby        | Prime          |
|---|----------------|----------------|
| Frequency   | 50 Hz          |                |
| Genset Power Rating   | 660 kVA        | 600 kVA        |
| Genset power rating with fan @ 0.8 power factor                   | 528 ekW        | 480 ekW        |
| Emissions   | Low BSFC       |                |
| Performance Number  | DM9822         | DM9821         |
| <b>Fuel Consumption</b>   |                |                |
| 100% load with fan, L/hr (gal/hr)                                 | 135.0 (35.7)   | 122.7 (32.4)   |
| 75% load with fan, L/hr (gal/hr)                                  | 100.9 (26.7)   | 91.9 (24.3)    |
| 50% load with fan, L/hr (gal/hr)                                  | 69.5 (18.3)    | 63.9 (16.9)    |
| 25% load with fan, L/hr (gal/hr)                                  | 40.1 (10.6)    | 37.3 (9.8)     |
| <b>Cooling System¹</b>  |                |                |
| Radiator air flow restriction (system), kPa (in. water)           | 0.12 (0.48)    | 0.12 (0.48)    |
| Radiator air flow, m³/min (cfm)                                   | 373 (13172)    | 373 (13172)    |
| Engine coolant capacity, L (gal)                                  | 20.8 (5.5)     | 20.8 (5.5)     |
| Radiator coolant capacity, L (gal)                                | 34 (8.9)       | 34 (8.9)       |
| Total coolant capacity, L (gal)                                   | 54.8 (14.4)    | 54.8 (14.4)    |
| <b>Inlet Air</b>  |                |                |
| Combustion air inlet flow rate, m³/min (cfm)                      | 34.2 (1206.4)  | 32.3 (1142.0)  |
| Max. Allowable Combustion Air Inlet Temp, °C (°F)                 | 49 (121)       | 47 (117)       |
| <b>Exhaust System</b>   |                |                |
| Exhaust stack gas temperature, °C (°F)                            | 571.1 (1060.0) | 555.6 (1032.0) |
| Exhaust gas flow rate, m³/min (cfm)                               | 102.4 (3614.4) | 94.3 (3329.2)  |
| Exhaust system back pressure (maximum allowable), kPa (in. water) | 10.0 (40.0)    | 10.0 (40.0)    |
| <b>Heat Rejection</b>   |                |                |
| Heat rejection to jacket water, kW (Btu/min)                      | 169 (9625)     | 157 (8947)     |
| Heat rejection to exhaust (total), kW (Btu/min)                   | 504 (28661)    | 458 (26037)    |
| Heat rejection to aftercooler, kW (Btu/min)                       | 91 (5186)      | 79 (4475)      |
| Heat rejection to atmosphere from engine, kW (Btu/min)            | 84 (4787)      | 79 (4468)      |

| Emissions (Nominal) <sup>2</sup>            | Standby              |                    | Prime              |
|---|----------------------|--------------------|--------------------|
| NOx, mg/Nm³ (g/hp-hr)                       | 3486.4 (7.0)         | 3490.3 (6.9)       |                    |
| CO, mg/Nm³ (g/hp-hr)                        | 507.4 (1.0)          | 506.5 (1.0)        |                    |
| HC, mg/Nm³ (g/hp-hr)                        | 1.7 (0.0)            | 2.6 (0.0)          |                    |
| PM, mg/Nm³ (g/hp-hr)                        | 4.7 (0.0)            | 4.7 (0.0)          |                    |
| Alternator <sup>3</sup>                     |                      |                    |                    |
| Voltages                                    | 380V                 | 400V               | 415V               |
| Motor starting capability @ 30% Voltage Dip | 1564 skVA            | 1739 skVA          | 1869 skVA          |
| Current                                     | SB: 1003A, PP: 902A  | SB: 953A, PP: 866A | SB: 918A, PP: 835A |
| Frame Size                                  | A3335L4              | A3335L4            | A3335L4            |
| Excitation                                  | SE                   | SE                 | SE                 |
| Temperature Rise                            | SB: 163°C, PP: 125°C |                    |                    |

SB: Standby PP: Prime Power

### 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) |
|-----------------|-----------------|-----------------|--------------------|
| 3910 (154)      | 1461 (58)       | 2156 (85)       | 3862 (8514)        |

### APPLICABLE CODES AND STANDARDS:

AS1359, IEC60034-1, ISO3046, ISO8528, NEMA MG1-33, UKCA, CE, EAC.

**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> Generator temperature rise is based on a 40° C ambient per IEC60034-1.

\* Governing Class capability as per ISO8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.

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