# Cat® C4.4
## Diesel Generator Sets

Image shown may not reflect actual configuration.

| | |
|---|---|
| Engine Model | Cat® C4.4 In-line 4, 4-cycle Diesel |
| Bore x Stroke | 105 mm x 127 mm (4.1 in x 5.0 in) |
| Displacement | 4.4 L (269 in³) |
| Compression Ratio | 18.2:1 |
| Aspiration | Turbocharged |
| Fuel Injection System | Common Rail |

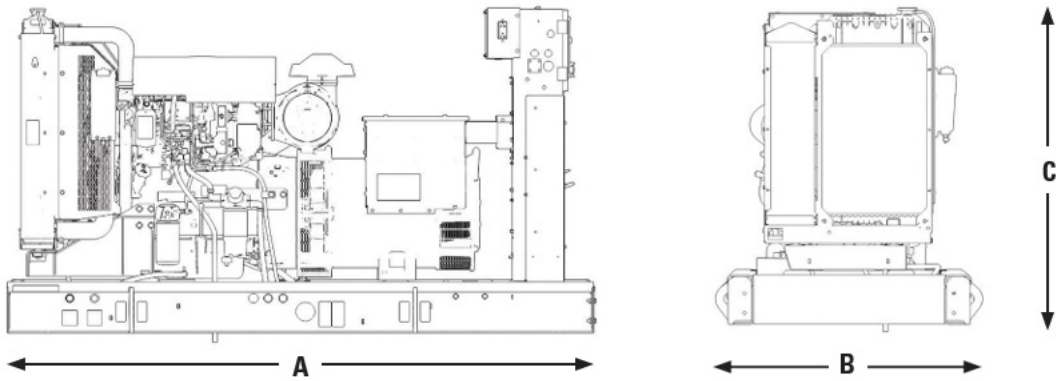
| Model | Standby | Prime | Emissions Strategy |
|---|---|---|---|
| D50-2LC | 50 ekW | 45 ekW | EPA TIER III |

## PACKAGE PERFORMANCE

| Performance | Standby | | Prime | |
|---|---|---|---|---|
| | 3-Phase | 1-Phase | 3-Phase | 1-Phase |
| Frequency | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| Genset power rating | 63 kVA | 50 kVA | 50 kVA | 45 kVA |
| Genset power rating with fan @ 0.8 power factor | 50 ekW | 50 ekW | 45 ekW | 45 ekW |
| Performance number | P3454A | P3454A | P3454B | P3454B |
| **Fuel Consumption** | | | | |
| 100% load with fan, L/hr (gal/hr) | 16.3 (4.3) | 15.9 (4.2) | 16.3 (4.3) | 14.2 (3.8) |
| 75% load with fan, L/hr (gal/hr) | 12.4 (3.3) | 12.0 (3.2) | 12.4 (3.3) | 10.9 (2.9) |
| 50% load with fan, L/hr (gal/hr) | 9.0 (2.4) | 8.7 (2.3) | 9.0 (2.4) | 8.0 (2.1) |
| **Cooling System[1]** | | | | |
| Radiator air flow restriction (system), kPa (in. water) | 0.12 (0.48) | 0.12 (0.48) | 0.12 (0.48) | 0.12 (0.48) |
| Engine coolant capacity, L (gal) | 7.0 (1.8) | 7.0 (1.8) | 7.0 (1.8) | 7.0 (1.8) |
| Radiator coolant capacity, L (gal) | 9.5 (2.5) | 9.5 (2.5) | 9.5 (2.5) | 9.5 (2.5) |
| Total coolant capacity, L (gal) | 16.5 (4.3) | 16.5 (4.3) | 16.5 (4.30) | 16.5 (4.30) |
| **Inlet Air** | | | | |
| Combustion air inlet flow rate, m³/min (CFM) | 5.3 (187.2) | 5.3 (187.2) | 5.2 (183.6) | 5.2 (183.6) |
| Max. allowable combustion air inlet temp, °C (°F) | 45 (113) | 45 (113) | 45 (113) | 45 (113) |
| **Exhaust System** | | | | |
| Exhaust stack gas temperature, °C (°F) | 559 (1039) | 559 (1039) | 521 (969) | 521 (969) |
| Exhaust gas flow rate, m³/min (CFM) | 13.7 (484) | 13.7 (484) | 12.8 (452.0) | 12.8 (452) |
| Exhaust system backpressure (maximum allowable), kPa (in. water) | 15.0 (60.2) | 15.0 (60.2) | 15.0 (60.2) | 15.0 (60.2) |
| **Heat Rejection** | | | | |
| Heat rejection to exhaust (total), kW (BTU/min) | 66.9 (3805) | 66.9 (3805) | 66.9 (3805) | 59.3 (3372) |
| Heat rejection to atmosphere from engine, kW (BTU/min) | 14.9 (847.3) | 14.9 (847.3) | 14.9 (847.3) | 12.5 (710.9) |
| **Emissions (Nominal)[2]** | | | | |
| NOx + HC, g/kW-hr | 4.42 | 4.42 | 4.42 | 4.42 |
| CO, g/kW-hr | 1.02 | 1.02 | 1.02 | 1.02 |
| PM, g/kW-hr | 0.26 | 0.18 | 0.26 | 0.18 |

| Alternator[3] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Duty Cycle | | Standby | | | | | Prime | | | | |
| Phase | | 3-Phase | | | | 1-Phase | 3-Phase | | | | 1-Phase |
| Voltages, V | | 480/277 | 240/120 | 208/120 | 600/347 | 240/120 | 480/277 | 240/120 | 208/120 | 600/347 | 240/120 |
| Current, Amps | | 75 | 150 | 174 | 60 | 208 | 68 | 135 | 156 | 54 | 188 |
| Excitation | | SE | SE | SE | AREP | SE | SE | SE | SE | AREP | SE |
| Frame: LC1514N | Temperature Rise, °C | 125 | | | | | 105 | | | | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 131 | | | | | 131 | | | | |
| Frame: LC1514P | Temperature Rise, °C | 105 | 125 | 125 | | | 80 | 105 | 105 | | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 157 | 128 | 128 | | | 157 | 128 | 128 | | |
| Frame: LCB1514P | Temperature Rise, °C | | | | | 125 | | | | | 105 |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | | | | | 114 | | | | | 114 |
| Frame: LC1524N | Temperature Rise, °C | | | | 125 | | | | | 105 | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | | | | 156 | | | | | 156 | |
| Frame: LC1524P | Temperature Rise, °C | | | | 105 | | | | | 80 | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | | | | 182 | | | | | 182 | |
| Frame: LC3114D | Temperature Rise, °C | | 80 | 80 | | | | 80 | 80 | | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | | 168 | 168 | | | | 168 | 168 | | |

## WEIGHTS & DIMENSIONS




| Length "A" mm (in) | Width "B" mm (in) | Height "C" mm (in) | Dry Weight kg (lb) |
|---|---|---|---|
| 1918 (76) | 1013 (40) | 1172 (46) | 1005 (2216) |

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

### APPLICABLE CODES AND STANDARDS:

CSA C22.2 No 100-04, UL142, UL489, UL869, cUL/UL2200, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-33 and facilitates compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

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 ekW 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

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

[2] 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.

[3] 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.

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