# Cat® C15
## Diesel Generator Sets

**Standby & Prime: 60 Hz**



Image shown might not reflect actual configuration.

| | |
|---|---|
| Engine Model | Cat® C15 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 – G3 Class* capable |

| Model | Standby | Prime | Emission Strategy |
|---|---|---|---|
| C15 | 500 ekW, 625 kVA | 455 ekW, 569 kVA | TIER II Non-Road |

### PACKAGE PERFORMANCE

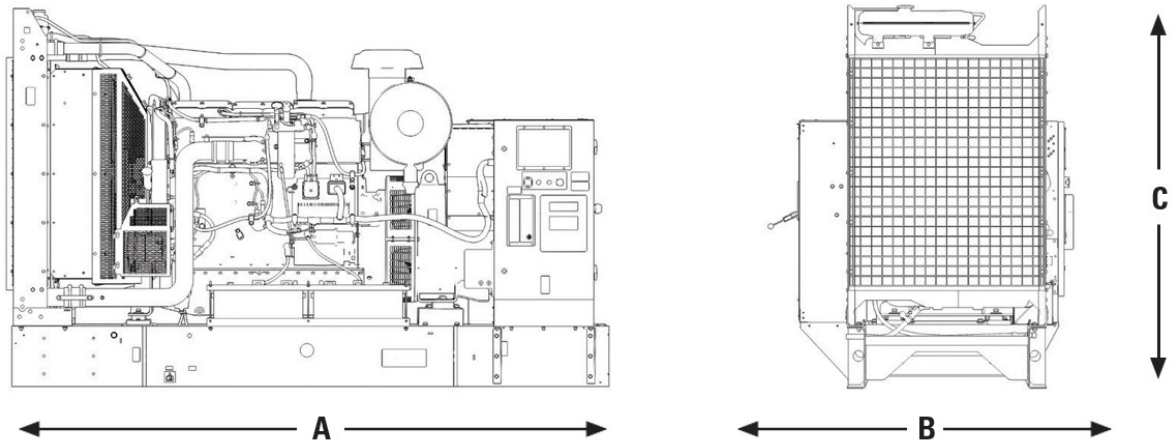
| Performance | Standby | Prime |
|---|---|---|
| Frequency | 60 Hz | |
| Genset Power Rating | 625 kVA | 569 kVA |
| Genset power rating with fan @ 0.8 power factor | 500 ekW | 455 ekW |
| Emissions | TIER II Non-Road | |
| Performance Number | DM8155 | DM8154 |
| **Fuel Consumption** | | |
| 100% load with fan, L/hr (gal/hr) | 133.9 (35.3) | 126.3 (33.3) |
| 75% load with fan, L/hr (gal/hr) | 108.0 (28.5) | 97.2 (25.6) |
| 50% load with fan, L/hr (gal/hr) | 69.7 (18.4) | 63.9 (16.8) |
| 25% load with fan, L/hr (gal/hr) | 40.9 (10.8) | 38.2 (10.0) |
| **Cooling System[1]** | | |
| Radiator air flow restriction (system), kPa (in. water) | 0.12 (0.48) | 0.12 (0.48) |
| Radiator air flow, m³/min (CFM) | 720 (25426) | 720 (25426) |
| Engine coolant capacity, L (gal) | 20.8 (5.5) | 20.8 (5.5) |
| Radiator coolant capacity, L (gal) | 54 (14) | 54 (14) |
| Total coolant capacity, L (gal) | 75 (20) | 75 (20) |
| **Inlet Air** | | |
| Combustion air inlet flow rate, m³/min (CFM) | 38.2 (1349) | 38.2 (1349) |
| Max. Allowable Combustion Air Inlet Temp, °C (°F) | 49 (120) | 49 (120) |
| **Exhaust System** | | |
| Exhaust stack gas temperature, °C (°F) | 531 (988) | 524 (975) |
| Exhaust gas flow rate, m³/min (CFM) | 109.6 (3870) | 101.2 (3573.4) |
| Exhaust system backpressure (maximum allowable), kPa (in. water) | 10.0 (40.0) | 10.0 (40.0) |
| **Heat Rejection** | | |
| Heat rejection to jacket water, kW (BTU/min) | 182 (10375) | 172 (9781) |
| Heat rejection to exhaust (total), kW (BTU/min) | 493 (28036) | 483 (27467) |
| Heat rejection to aftercooler, kW (BTU/min) | 121 (6881) | 120 (6824) |
| Heat rejection to atmosphere from engine, kW (BTU/min) | 91 (5175) | 87 (4947) |
| Heat rejection from alternator, kW (BTU/min) | 31.9 (1814) | 28.0 (1592) |

| Emissions (Nominal)[2] | Standby | Prime |
|---|---|---|
| NOx, mg/Nm³ (g/hp-hr) | 2129.1 (4.6) | 1554.5 (3.6) |
| CO, mg/Nm³ (g/hp-hr) | 301.5 (0.6) | 362.9 (0.8) |
| HC, mg/Nm³ (g/hp-hr) | 8.8 (0.03) | 12.2 (0.04) |
| PM, mg/Nm³ (g/hp-hr) | 9.5 (0.03) | 11.9 (0.03) |

| Alternator[3] | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Duty Cycle | | Standby | | | | | | Prime | | | | | |
| Phase | | 3-Phase | | | | | | 3-Phase | | | | | |
| Voltages*, V | | 208 | 220 | 240 | 380 | 480 | 600 | 208 | 220 | 240 | 380 | 480 | 600 |
| Current, Amps | | 1735 | 1640 | 1504 | 950 | 752 | 601 | 1579 | 1493 | 1368 | 864 | 684 | 547 |
| Frame: LC6124F Excitation: AREP | Temperature Rise @ 40°C | 150 | 130 | 130 | | 130 | 130 | 125 | 105 | 105 | | 105 | 105 |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1325 | 1466 | 1712 | | 1712 | 1714 | 1325 | 1466 | 1712 | | 1712 | 1714 |
| Frame: LC6124G Excitation: AREP | Temperature Rise @ 40°C | 130 | 130 | 105 | | 105 | 105 | 105 | 105 | 105 | | 105 | 105 |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1335 | 1479 | 1729 | | 1729 | 1731 | 1335 | 1479 | 1729 | | 1729 | 1731 |
| Frame: LC7024H Excitation: AREP | Temperature Rise @ 40°C | | | | | | 130 | | | | | | 105 |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | | | | | | 2023 | | | | | | 2023 |
| Frame: LC7024J Excitation: AREP | Temperature Rise @ 40°C | 105 | 105 | 105 | | 105 | | 80 | 80 | 80 | | 80 | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1524 | 1694 | 1993 | | 1993 | | 1524 | 1694 | 1993 | | 1993 | |
| Frame: LC7024F Excitation: AREP | Temperature Rise @ 40°C | 130 | 105 | 105 | 150 | | | 105 | 105 | 80 | 125 | | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1248 | 1387 | 1633 | 1050 | | | 1248 | 1387 | 1633 | 1050 | | |
| Frame: LC6114F Excitation: SE | Temperature Rise @ 40°C | 150 | 130 | 130 | | 130 | | 125 | 105 | 105 | | 105 | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1104 | 1222 | 1428 | | 1428 | | 1104 | 1222 | 1428 | | 1428 | |
| Frame: LC6114G Excitation: SE | Temperature Rise @ 40°C | 130 | 130 | 105 | | 105 | | 105 | 105 | 105 | | 105 | |
| | Motor Starting Capability @ 30% Voltage Dip, skVA | 1116 | 1236 | 1445 | | 1445 | | 1116 | 1236 | 1445 | | 1445 | |

***Note:** 220V and 380V are additional offerings for the Latin America Market.

## WEIGHTS & DIMENSIONS




| Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|---|---|---|---|
| 3476 (137) | 1628 (64) | 2128 (84) | 4365 (9623) |

**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, UL489, UL869, UL2200, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-22, NEMA MG 1-33 and facilitates the compliance to NFPA 37, NFPA70, NFPA 99, NFPA110.

**Note:** Codes may not be available for all model configurations. Site level review needed for NFPA 70. Please consult your Cat Dealer 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 ISO 3046 standard conditions.

**FUEL RATES:** 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 29° C (85° F) and weighing 838.9 g/litre (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

## 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.

*Governing Class capability as per ISO 8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.

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