

Cat® C4.4

DIESEL GENERATOR SETS



Standby & Prime: 50 Hz & 60 Hz



| | |
|-----------------------------------|---------------------------------------|
| Engine Model | Cat® C4.4 In-line 4, 4-cycle diesel |
| Bore / Stroke mm (in) | 105.0 (4.1) / 127.0 (5.0) |
| Displacement L (in ³) | 4.4 (268.5) |
| Compression Ratio | 18.23:1 |
| Aspiration | Turbocharged Air To Air Charge Cooled |
| Fuel Injection System | Direct Injection |
| Governor | Electronic |

Image shown might not reflect actual configuration.

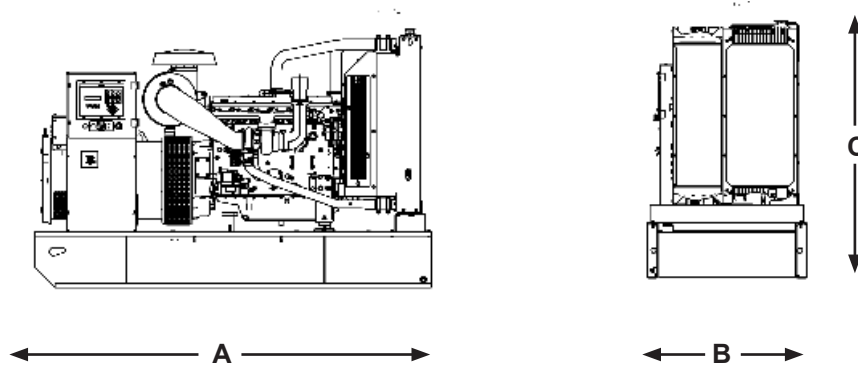
| Model | Hz | Standby | Prime | Emission Strategy |
|----------|----|---------------------|--------------------|-------------------------|
| DE125AE0 | 50 | 110.0 kVA, 88.0 kW | 100.0 kVA, 80.0 kW | Non Certified Emissions |
| | 60 | 125.0 kVA, 100.0 kW | 113.0 kVA, 90.4 kW | |

PACKAGE PERFORMANCE

| Technical Data | 50 Hz | | 60 Hz | |
|--|----------------------------|----------------|----------------------------|----------------|
| | Standby | Prime | Standby | Prime |
| Engine Speed: RPM | 1500 | | 1800 | |
| Gross Engine Power: kW (hp) | 103.0 (138.0) | 93.6 (126.0) | 117.5 (158.0) | 106.8 (143.0) |
| BMEP: kPa (psi) | 1873.0 (271.7) | 1702.0 (246.9) | 1781.0 (258.3) | 1619.0 (234.8) |
| Regenerative Power: kW | 8.2 | | 13.8 | |
| Fuel System¹ | | | | |
| 110% load: l/hr (US gal/hr) | N/A | 24.5 (6.5) | N/A | 29.3 (7.7) |
| 100% load: l/hr (US gal/hr) | 24.5 (6.5) | 22.2 (5.9) | 29.3 (7.7) | 26.1 (6.9) |
| 75% load: l/hr (US gal/hr) | 18.4 (4.9) | 16.8 (4.4) | 21.8 (5.8) | 19.8 (5.2) |
| 50% load: l/hr (US gal/hr) | 12.9 (3.4) | 11.9 (3.1) | 15.4 (4.1) | 14.2 (3.8) |
| Fuel Filter Type | Replaceable Element | | Replaceable Element | |
| Recommended Fuel | Class A2 Diesel or BSEN590 | | Class A2 Diesel or BSEN590 | |
| Air System | | | | |
| Combustion Air Flow: m ³ /min (cfm) | 6.3 (221) | 6.0 (212) | 7.8 (275) | 7.8 (274) |
| Air Filter Type | Replaceable Element | | Replaceable Element | |
| Max. Combustion Air intake restriction: kPa (in H ₂ O) | 8.0 (32.1) | | 8.0 (32.1) | |
| Radiator Cooling Air flow: m ³ /min (cfm) | 187.8 (6632) | | 244.2 (8624) | |
| External Restriction to Cooling Air Flow: Pa (in H ₂ O) | 125 (0.5) | | 125 (0.5) | |
| Cooling System² | | | | |
| Heat Rejected to Water & Lube Oil: kW (Btu/min) | 50.7 (2883) | 46.1 (2622) | 64.0 (3640) | 57.7 (3281) |
| Heat Radiated from Engine and Alternator: kW (Btu/min) | 18.2 (1035) | 15.7 (893) | 20.6 (1172) | 17.5 (995) |
| Cooling System Capacity: L (US gal) | 17.5 (4.6) | | 17.5 (4.6) | |
| Water Pump Type | Centrifugal | | Centrifugal | |
| Radiator Fan Load: kW (hp) | 2.8 (3.8) | | 4.8 (6.4) | |

| Exhaust System | | 50 Hz | | 60 Hz | | | | | |
|---|-------------|--------------|------------------------------------|---|-------------------|-------|------|---------|-------|
| | | Standby | Prime | Standby | Prime | | | | |
| Exhaust Gas Flow: m ³ /min (cfm) | | 16.3 (576) | 15.2 (537) | 20.4 (720) | 18.4 (650) | | | | |
| Exhaust Gas Temperature: °C (°F) | | 543 (1009) | 514 (957) | 574 (1065) | 517 (963) | | | | |
| Silencer Type | | Industrial | | Industrial | | | | | |
| Silencer Model & Quantity: | | EXSY1 (1) | | EXSY1 (1) | | | | | |
| Pressure Drop Across Silencer System: kPa (in H ₂ O) | | 0.22 (0.066) | | 0.34 (0.100) | | | | | |
| Silencer Noise Reduction Level: dB | | 15 | | 15 | | | | | |
| Max. Allowable Back Pressure: kPa (in H ₂ O) | | 18.0 (5.3) | | 15.0 (4.4) | | | | | |
| Generator Technical Data | | | | | | | | | |
| Physical Data | | | Operating Data | | | | | | |
| Frame Model | GTA 202AS36 | | Overspeed: RPM | 2250 | | | | | |
| No. of Bearings | 1 | | Voltage Regulation: (steady state) | +/- 0.5% | | | | | |
| Wires | 12 | | Wave Form NEMA = TIF: | 50 | | | | | |
| IP Rating & Insulation Class | IP21 | | Wave Form IEC = THF: | 2.0% | | | | | |
| Winding Pitch-Code | 2/3 - NA | | Total Harmonic Content LL/LN: | 5.0% | | | | | |
| Excitation | AUX COIL | | Radio Interference: | Suppression is in line with European Standard EN61000-6 | | | | | |
| AVR Model | A-OPT-03 | | Radiant Heat: kW (Btu/min) | 10.7 (608) 11.2 (637) | | | | | |
| Generator Performance Data ³ | | | 50 Hz | | 60 Hz | | | | |
| Voltage | | | 380/220V | | 208/120V 220/127V | | | | |
| Motor Starting Capability*: kVA | | | 317 | | 308 350 | | | | |
| Short Circuit Capacity: % | | | 300 | | 300 300 | | | | |
| Reactances: Per Unit | | | | | | | | | |
| | | | X _d | 2.230 | 2.720 | 2.340 | | | |
| | | | X' _d | 0.117 | 0.135 | 0.120 | | | |
| | | | X'' _d | 0.093 | 0.108 | 0.095 | | | |
| Capacities | | | | | | | | | |
| 50 Hz | | | | 60 Hz | | | | | |
| Voltages | Prime | | Standby | | Voltages | Prime | | Standby | |
| | kVA | kW | kVA | kW | | kVA | kW | kVA | kW |
| 380/220V | 100.0 | 80.0 | 110.0 | 88.0 | 220/127V | 113.0 | 90.4 | 125.0 | 100.0 |
| | | | | | 208/120V | 112.5 | 90.0 | 125.0 | 100.0 |

WEIGHTS & DIMENSIONS



| Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|--------------------|--------------------|--------------------|-----------------------|
| 1980 (78.0) | 890 (35.0) | 1376 (54.2) | 1065 (2348) |

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

NOTES:

- ¹ Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2.
- ² Cooling system designed to operate in ambient conditions up to 50°C (122°F). Contact your local Cat dealer for power ratings at specific site conditions.
- ³ Reactances shown are applicable to prime ratings.
 *Based on 30% voltage dip at 0.6 power factor

DEFINITIONS:

STANDBY: These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

PRIME: These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

DOCUMENTS:

A full set of operation and maintenance manuals and circuit wiring diagrams.

STANDARD REFERENCE CONDITIONS:

Note: Standard reference conditions 25°C (77°F) air inlet temp, 100m (328ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

QUALITY STANDARDS:

The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.

WARRANTY:

All prime equipment carries a one year manufacturer's warranty. Standby equipment, limited to 500 running hours per year, has a two-year manufacturer's warranty. For details on warranty cover please contact your local CAT Dealer.

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