

Standby & Prime: 50Hz; 380, 400V & 415V



Image shown might not reflect actual configuration

| | |
|-----------------------|--|
| Engine Model | Cat® C13 ACERT In-line 6, 4-cycle diesel |
| Bore x Stroke | 130mm x 157mm (5.1 in x 6.2in) |
| Displacement | 12.5 L (763 in³) |
| Compression Ratio | 16.3:1 |
| Aspiration | Turbocharged Air-to-Air Aftercooled |
| Fuel Injection System | MEUI |
| Governor | Electronic ADEM™ A4 |

| Model | Standby | Prime | Emission Strategy |
|---------|------------------|------------------|-------------------------|
| DE400E0 | 400 kVA, 320 ekW | 350 kVA, 280 ekW | Non-Certified Emissions |

PACKAGE PERFORMANCE

| Performance | Standby | Prime |
|--|--------------------------|--------------------------|
| Frequency | 50 Hz | 50 Hz |
| Genset Power Rating | 400 kVA | 350 kVA |
| Gen set power rating with fan @ 0.8 power factor | 320 ekW | 280 ekW |
| Fuelling strategy | Non-Certified Emissions | Non-Certified Emissions |
| Performance Number | EM0425 | EM0431 |
| Fuel Consumption | | |
| 100% load with fan | 83.5 L/hr, 22 gal/hr | 72.4 L/hr, 19.1 gal/hr |
| 75% load with fan | 61.9 L/hr, 16.4 gal/hr | 54.8 L/hr, 14.5 gal/hr |
| 50% load with fan | 43.7 L/hr, 11.5 gal/hr | 39.0 L/hr, 10.3 gal/hr |
| 25% load with fan | 26.1 L/hr, 6.9 gal/hr | 23.8 L/hr, 6.3 gal/hr |
| Cooling System ¹ | | |
| Radiator air flow restriction (system) | 0.12 kPa, 0.48 in. Water | 0.12 kPa, 0.48 in. Water |
| Radiator air flow | 398 m³/min, 14055 cfm | 398 m³/min, 14055 cfm |
| Engine coolant capacity | 13.9 L, 3.7 gal | 13.9 L, 3.7 gal |
| Radiator coolant capacity | 43 L, 11.5 gal | 43 L, 11.5 gal |
| Total coolant capacity | 56.9 L, 15.2 gal | 56.9 L, 15.2 gal |
| Inlet Air | | |
| Combustion air inlet flow rate | 22.3 m³/min, 790 cfm | 20.3 m³/min, 717.5 cfm |
| Max. Allowable Combustion Air Inlet Temp | 44 °C, 110 °F | 44 °C, 110 °F |
| Exhaust System | | |
| Exhaust stack gas temperature | 529.2 °C, 985 °F | 504.3 °C, 939.7 °F |
| Exhaust gas flow rate | 62.8 m³/min, 2216 cfm | 54.8 m³/min, 1936.6 cfm |
| Exhaust system backpressure (maximum allowable) | 10.0 kPa, 40.0 in. water | 10.0 kPa, 40.0 in. water |
| Heat Rejection | | |
| Heat rejection to jacket water | 128 kW, 7271 Btu/min | 113 kW, 6453 Btu/min |
| Heat rejection to exhaust (total) | 290 kW, 16484 Btu/min | 249 kW, 14146 Btu/min |
| Heat rejection to aftercooler | 54 kW, 3037 Btu/min | 43 kW, 2425 Btu/min |
| Heat rejection to atmosphere from engine | 53 kW, 3031 Btu/min | 47 kW, 2694 Btu/min |

| Emissions (Nominal) ² | | | | | |
|---|---------------------------------------|--------|---|--------|---------------|
| NOx | 2731 mg/Nm ³ , 5.3 g/hp-hr | | 2874.9 mg/Nm ³ , 5.6 g/hp-hr | | |
| CO | 750 mg/Nm ³ , 1.47 g/hp-hr | | 761.4 mg/Nm ³ , 1.5 g/hp-hr | | |
| HC | 8 mg/Nm ³ , 0.02 g/hp-hr | | 7.2 mg/Nm ³ , 0.0 g/hp-hr | | |
| Alternator ³ | | | | | |
| Voltages | 415V | | 400V | | 380V |
| Motor Starting Capability @ 30% Voltage Dip | 1071 skVA | | 793 skVA | | 888 skVA |
| Current | 556 amps | | 577 amps | | 381 amps |
| Frame Size | A2925L4 | | A2925L4 | | A2925L4 |
| Excitation | SE | | SE | | SE |
| Temperature Rise | 125 °C | 257 °F | 125 °C | 257 °F | 125 °C 257 °F |

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.

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.

Fuel Rates are 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.

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C13 Sound Attenuated Enclosures

50 Hz / 60 Hz

These sound attenuated, factory installed enclosures incorporate internally mounted super critical level silencers, designed for safety and aesthetic value on integral fuel tank base or optional dual wall integral fuel tank base for total fluid containment. These enclosures are of extremely rugged construction to withstand exposure to the elements and provide weather protection.

Image shown may not represent actual configuration

Features

Robust / Highly Corrosion Resistant Construction

- Factory installed on integral fuel tank base
- Environmentally friendly, polyester powder baked paint
- 1.6 mm (0.063 in) galvanized steel
- All round overhanging base to protect enclosure
- High-grade engineering thermoplastic corner posts for protection
- Integral lifting frame
- Compression door latches giving solid door seal
- Zinc plated or black coated stainless steel fasteners
- Internally mounted super critical exhaust silencing system

Excellent Access

- Large cable entry area for installation ease
- Accommodates rear mounted breaker and control panel
- Double doors on both sides
- Vertically hinged doors with solid bar door stays to hold doors open at 135° rotation
- Lube oil and coolant drains pipes to exterior of enclosure and terminated drain valves
- Radiator fill cover

Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety
- Control panel viewing window
- Stub-up area is rodent proof

Options

- Caterpillar yellow or white paint
- Integral dual wall fuel tank base for total fluid containment (fuel, oil and coolant)

Enclosure Package Operating Characteristics

| Model | kVA | ekW | SB/PP | LWA | Sound Pressure Levels dBA | | | | Air Flow Rate | | Ambient Capability at 100% Load* | |
|--------------|-----|-----|-------|-----|---------------------------|-----------|------------|-----------|---------------|-------|----------------------------------|-----|
| | | | | | 1m (3.3 ft) | | 7m (23 ft) | | m³/s | cfm | °C | °F |
| | | | | | 75% Load | 100% Load | 75% Load | 100% Load | | | | |
| 50 Hz | | | | | | | | | | | | |
| DE400E0 | 350 | 280 | PP | 97 | 79 | 80 | 69 | 70 | 5.6 | 11866 | 54 | 129 |
| | 400 | 320 | SB | 97 | 80 | 80 | 70 | 70 | 5.6 | 11866 | 54 | 129 |
| DE450E0 | 400 | 320 | PP | 98 | 80 | 80 | 70 | 70 | 5.6 | 11866 | 49 | 120 |
| | 450 | 360 | SB | 98 | 80 | 81 | 70 | 71 | 5.6 | 11866 | 49 | 120 |
| DE450E3 | 400 | 320 | PP | – | 80 | 80 | 70 | 70 | 5.6 | 11866 | 58 | 136 |
| | 450 | 360 | SB | – | 80 | 80 | 70 | 71 | 5.6 | 11866 | 54 | 129 |
| 60 Hz | | | | | | | | | | | | |
| DE350SE0 | 400 | 320 | PP | – | 82 | 82 | 72 | 72 | 7.9 | 16739 | 56 | 133 |
| | 438 | 350 | SB | – | 82 | 83 | 72 | 72 | 7.9 | 16739 | 57 | 135 |
| DE400SE0 | 438 | 350 | PP | – | 82 | 83 | 72 | 72 | 7.9 | 16739 | 52 | 126 |
| | 500 | 400 | SB | – | 82 | 83 | 72 | 73 | 7.9 | 16739 | 51 | 124 |

*Ambient capability measured with the Cat extended life coolant at sea level.



Approximate weight of enclosure package: 4667 kg (10289 lb), **4770 kg (10516 lb) DE450E3. Exact weight is dependent on options. Enclosure weight includes: Sound attenuated enclosure, exhaust system, base and generator set.

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