

Image shown may not reflect actual configuration

# Cat® 3508B Offshore Emergency Genset

The Cat 3508B  Emergency Generator Set delivers 910 ekW (1138 kVA) at 60 Hz and 1800 rpm for offshore emergency-power applications. Its V-8 diesel engine produces 968 bkW (1298 bhp), uses SCAC cooling and ADEM A3 electronic control, and is certified to IMO Tier I. The package is assembled, tested, and validated to minimize vibration and maximize component life in demanding offshore service.

## Features and Benefits:

### INSTALLATION & PACKAGE FLEXIBILITY

- Single-lift handling and separate-circuit aftercooling reduce shipyard scope, connection work, and installation complexity—helping projects reach commissioning sooner.
- Marine-society coupling options and the available three-point rig base maintain drivetrain alignment across varied generator and foundation arrangements, reducing custom engineering and vibration-related risk.

### LOWER LIFECYCLE COST

- Electronically controlled unit injectors meter fuel precisely while filter changes align with service intervals, helping reduce fuel use, consumables, and planned maintenance time.
- Reconditionable core components and large inspection openings simplify overhaul and internal access, helping extend asset value and lower repair labor over the package life.

### EMERGENCY READINESS & PROTECTION

- Fast load acceptance, automatic start/stop wiring, and a dedicated air-start system help critical offshore loads receive power quickly when normal supply is lost.
- Customer-programmable ADEM A3 derates, alarms, and shutdowns—supported by independent overspeed protection, emergency stop, and air shutoff—help prevent abnormal conditions from becoming costly failures.

## Specifications

| | | | |
|---|---|---|---|
| **Configuration** | V 8, 4-Stroke-Cycle Diesel | **Governor and Protection** | Electronic ADEM™ A3 |
| **Emissions** | IMO Tier I | **Lube Oil System (refill)** | 227 L (60 U.S. gal) |
| **Aspiration** | Turbocharged-Aftercooled | **Cooling System (Engine)** | 309 L (81.6 U.S. gal) |
| **Bore** | 170 mm (6.7 in) | **Oil Change Interval** | 1000 hours |
| **Stroke** | 190 mm (7.5 in) | **Displacement** | 35 L (2116in³) |

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## Ratings and Fuel Consumption

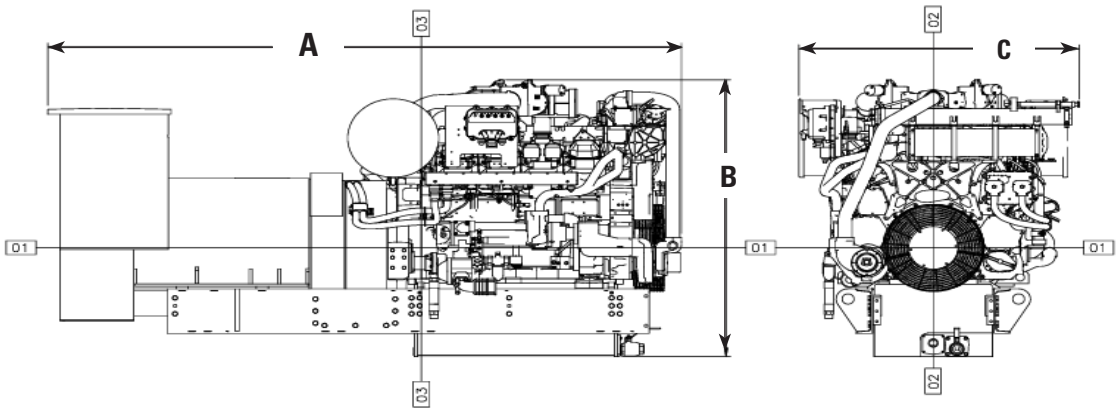
| Standby 60 Hz ekW (kVA) | Mission Critical 60 Hz ekW (kVA) | Prime 60 Hz ekW (kVA) | Continuous 60 Hz ekW (kVA) | Emissions Performance |
|---|---|---|---|---|
| 1000 (1250) | 1000 (1250) | 910 (1137) | 830 (1038) | Low Fuel Consumption |

## Rating Definitions and Conditions

Prime rating with 10% overload for MCS certification. Output is available with varying load for unlimited time in accordance with ISO 8528; typical load factor is 60–70% with no annual-hours limit. Conditions are based on SAE J1995 at 100 kPa and 25°C and also apply at ISO 3046/1, DIN 6271, and BS 5514 standard conditions. Ratings are valid through 60°C air-cleaner inlet temperature. Fuel-consumption tolerance is 5% using 35° API fuel.

## Dimensions

All dimensions are approximate.

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|---|---|---|---|---|---|---|
| **A** | Length | 4031 mm | 159 in | **C** Width | 1784 mm | 70 in |
| **B** | Height | 2048 mm | 70 in | Weight (dry) | 12,475kg | 27,503 lb |

Note: : Dimensions are dependent on generator and options

Note : Weight includes engine, generator, base, coupling, and all auxilry components. Weight may vary depending upon individual confidguration.

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## Standard and Optional Equipment

### Standard Equipment

**Air Inlet System**
- Corrosion-resistant coated aftercooler core
- Regular-duty air cleaner with soot filter
- Dual turbochargers with 152 mm (6 in) straight connections
- Service indicators

**Control System**
- ADEM A3 electronic engine control, LH
- Rigid wiring harness
- Requires clean 24 V DC power (10 A continuous, 20 A intermittent)

**Cooling System**
- Outlet-controlled thermostat and housing
- Gear-driven jacket-water pump
- 127 mm (5 in) water outlet; gear-driven centrifugal SCAC pump
- SCAC thermostat maintains coolant at or above 30°C (85°F)

**Exhaust System**
- Dry gas-tight exhaust manifolds and dual turbochargers with thermo-laminated heat shields
- Flexible exhaust fitting and weldable exhaust flange

**Flywheel and Flywheel Housings**
- SAE No. 00 flywheel, 183 teeth; SAE No. 00 flywheel housing

**Fuel System**
- LH fuel filter
- Fuel transfer pump
- LH priming pump; electronically controlled unit injectors
- Relocated customer fuel connections with rigid lines and two flexible hoses

**Instrumentation**
- Marine Power Display for oil pressure, coolant temperature, fuel pressure, DC voltage, air restriction, exhaust temperatures, filter differentials, hours, speed, and fuel consumption
- Prioritized alarms and control/override switches

**Mounting System**
- Engine-length industrial floor-type rails, 254 mm (10 in) C-channel; emergency package includes 13 in engine-and-generator rails and mounting groups

**Lube System**
- Top-mounted crankcase breather; oil cooler
- LH oil filter and dipstick; deep-sump oil pan
- Gear-type oil pump; 2 in NPT oil-pan drain valve.

**Power Take-Offs**
- No standard power take-off listed

**Protection System**
- ADEM A3 customer-programmable deration, alarm, and shutdown protection for pressure, temperature, overspeed, restriction, voltage, and related conditions; emergency-stop pushbutton

**Starting System**
- RH air-starting motor, 620–1034 kPa (90–150 psi), LH control; air silencer; engine wired for automatic start/stop

**General**
- Cat yellow paint with black rails; vibration damper and guard; lifting eyes; DNV, ABS, or GL marine-society type-approved coupling for emergency sets

### Optional Equipment

**Air Inlet System**
- Air filter for generator; intake-manifold temperature sensors.
- Four front-mounted turbochargers

**Control System**
- Local speed-throttle control
- Direct rack-control interface (0–200 mA DC)
- Manual voltage control
- Communications-management device
- Remote panel display

**Cooling System**
- Coolant-level sensor; inlet/outlet and emergency-water connections
- Engine-mounted plate-type heat exchanger; air separator

**Exhaust System**
- Spark-arresting muffler
- Exhaust-temperature thermocouples

**Flywheel and Flywheel Housings**
- Two-bearing generators
- Optional bearing RTDs

**Fuel System**
- Duplex fuel filter
- Fuel-level switch

**Instrumentation**
- Remote cylinder-temperature display
- Exhaust thermocouples
- Bearing RTDs; particle detector
- Intake-manifold and oil-temperature sensors

**Lubrication System**
- Bypass centrifugal oil filter; duplex oil filter
- Sump pump

**Power Take-Offs**
- Auxiliary drive shafts and pulleys

**Protection System**
- Particle detector
- Additional temperature sensors

**Starting System**
- Battery charger
- Charging alternator
- Air or electric starting motor
- Redundant start with selector switch

**General**
- Marine-society and IMO certifications
- Two-bearing generator options

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