FEATURES

Fuel/Emissions Strategy
Configuration option to fit any application:
- Fuel economy
- Non-certified, U.S. EPA Non-road Tier 2 levels
- U.S. EPA Tier 4 Interim without use of aftertreatment

Engine Design
- Rugged components for durability in harsh oilfield conditions
- Increased power density and rugged base for highly mobile jobs
- Permanent magnet, two-bearing, close coupled, oversized generator ideal for oilfield applications
- Heavy-duty, easy-to-clean cooling system with high ambient capability
- Advanced controls
- Focus on operator safety

Advanced Digital Engine Management
ADEM A4 control system providing integrated ignition, speed governing, protection, and controls. ADEM A4 has improved: user interface, display system, shutdown controls, and system diagnostics.

Cat® EMCP 4.2 Series Control Panels
- Integrated control system and communications gateway
- EMCP 4.2 is standard and offers basic engine/generator monitoring, metering and protection and an open protocol allowing for simple integration.
- Also features more advanced options including power metering, modbus capability, and programmable discreet output

Product Support Offered Through Global Cat Dealer Network
- More than 2,200 dealer outlets
- Cat factory-trained dealer technicians service every aspect of your petroleum engine
- Cat parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•S™ program matches your oil and coolant samples against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience
Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.
- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site
For all your petroleum power requirements, visit www.catoilandgasinfo.com
STANDARD EQUIPMENT

Air Inlet System
- Heavy-duty dual element canister-type air cleaner
- Service indicator

Control Panels
- EMCP 4.2
- User interface panel — rear mount
- Emergency stop pushbutton
- Generator housing mounted

Cooling System
- Radiator with guard sized for 50°C
- Side-by-side cores
- Metal top and bottom tanks
- Coolant drain line with valve
- Fan and belt guards
- Cat Extended Life Coolant
- Coolant level sensor

Exhaust System
- Dry exhaust manifold

Fuel System
- Primary fuel filter
- Secondary fuel filter
- Manual fuel priming pump
- Fuel pump

Generators
- Class H insulation
- Permanent magnet
- IP23 protection
- Form wound stator
- Anti-condensation space heaters
- Two bearing
- Close coupled
- Oversized

Governor
- ADEM™ A4

Lube System
- Lubricating oil and filter
- Oil cooler
- Oil drain line with valves
- Fumes disposal — left side
- Gear-type lube oil pump

Mounting System
- Heavy-duty oilfield welded steel base (skiddable)
- Anti-vibration mounts (shipped loose)
- Designed welded base for increased durability
  (I-beam design)
- Dragability
- Package lifting eyes

Starting/Charging System
- 24V starting motor(s)
- 24V, 45-amp charging alternator

General
- Paint — Cat yellow except rails and radiators
  (gloss black)
- SAE standard rotation
- Flywheel and flywheel housing — SAE No. 0

OPTIONAL EQUIPMENT

Air Inlet System
- Precleaners

Control System
- Direct rack

Cooling System
- Jacket water heater

Exhaust System
- Flange and exhaust expanders
- Exhaust shielding

Generators
- Self excited

Mounting System
- Short base — 186” (4725 mm) total length
  Note: short base option does not include drag bars

Starting/Charging System
- Air starting motor
**SPECIFICATIONS**

**Cat SR4B Generator**

- Frame size: 691, 693
- Excitation: Permanent Magnet, SE Option
- Pitch: 0.7143, 0.667
- Number of poles: 4
- Number of bearings: 2
- Number of leads: 6
- Insulation: UL 1446 Recognized Class H with coastal insulation protection
- IP Rating: Drip Proof IP23
- Alignment: Close Coupled

**Cat EMCP 4.2 Series Control Panel**

- EMCP 4 controls
  - Run/Auto/Stop control
  - Speed adjust
  - Voltage adjust
  - Engine cycle crank
  - Emergency stop pushbutton
- EMCP 4.2 controller
  - 24-volt DC operation
  - Environmental sealed front face
  - Text alarm/event descriptions
  - True RMS AC metering, 3-phase, ±1% accuracy
- Digital indication for:
  - rpm
  - DC volts
  - Operating hours
  - Oil pressure (psi, kPa, or bar)
  - Coolant temperature
  - Volts (L-L and L-N), frequency (Hz)
  - Amps (per phase and average)
  - Power Factor (per phase and average)
  - kW (per phase, average, and percent)
  - kVA (per phase, average, and percent)

**C27 ACERT OILFIELD GENERATOR SET PACKAGES**

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Available Configurations:

- Low BSFC, Low Emissions*, EPA Tier 4 Interim
- Low BSFC, Low Emissions*, EPA Tier 4 Interim

**BSFC – Low BSFC:**

- 199.6 g/kW-hr (0.328 lb/bhp-hr)
- 199.6 g/kW-hr (0.328 lb/bhp-hr)

**BSFC – Low Emissions:**

- 203.3 g/kW-hr (0.334 lb/bhp-hr)
- 203.3 g/kW-hr (0.334 lb/bhp-hr)

**BSFC – Tier 4 Interim:**

- 212.3 g/kW-hr (0.349 lb/bhp-hr)
- 212.3 g/kW-hr (0.349 lb/bhp-hr)

*Non-certified Tier 2 levels
C27 ACERT™ DIESEL OILFIELD GENERATOR SET
725 ekW – 60 Hz, 1800 rpm

DIMENSIONS

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<th>Package Dimensions</th>
<th>Length</th>
<th>5228 mm</th>
<th>206 in</th>
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<tr>
<td>Length w/short base option</td>
<td>4725 mm</td>
<td>186 in</td>
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<tr>
<td>Width</td>
<td>1950 mm</td>
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<td>Height</td>
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<td>Engine Weight (dry)</td>
<td>9072 kg</td>
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Note: Overall dimensions apply to all configurations, diagram may differ from actual package. For reference only — do not use for installation design. See general dimension drawing #3716011 for detail.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034, ISO3046, ISO8528, NEMA MG 1-33, UL508A, 98/37/EC.
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. Prime power in accordance with ISO3046. Prime ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature just below the alarm temperature.

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/liter (7.001 lbs/U.S. gal). Additional ratings may be available for specific customer requirements, contact your Cat representative for details. For information regarding low sulfur fuel and biodiesel capability, please consult your Cat dealer.