CATERPILLAR® ENGINE SPECIFICATIONS

I-4, 4-Stroke-Cycle-Diesel
Emissions . . . . . . . . . . . . . . . . . . 60 Hz meets EPA Tier 3*,
50 Hz meets EU 97/68EC Stage II regulations
Displacement . . . . . . . . . . . . . . . . . . . . . 2.2 L (135 cu. in.)
Bore . . . . . . . . . . . . . . . . . . . . . . . . . . . 84 mm (3.31 in.)
Stroke . . . . . . . . . . . . . . . . . . . . . . . . . . 100 mm (3.94 in.)
Aspiration . . . . . . . . . . . . . . . . . . . . Naturally Aspirated
Governor . . . . . . . . . . . . . . . . . . . . Electrical Isochronous

Estimated Dry Weight
Open Set . . . . . . . . . . . . . . . . . . . . 389 kg (857 lb)
Enclosed Set . . . . . . . . . . . . . . . . . . 466 kg (1027 lb)

Refill Capacity
Cooling System
(engine and expansion tank) . . . . . 9 L (2.4 U.S. gal)
Lube Oil System . . . . . . . . . . . . . . 10.6 L (2.8 U.S. gal)
Oil Change Interval . . . . . . . . . . . . . . 500 hrs
Rotation (from flywheel end) . . . . . . . Counterclockwise

*EPA Tier 3 enforced from January 1, 2008 for engines < 37 kW

STANDARD EQUIPMENT

Air Inlet System
Air cleaner, single element canister type with rain cap
(open generator set only)

Control System
Electronic isochronous governor

Cooling System
Belt-driven centrifugal jacket water pump, gear-driven
seawater pump, heat exchanger with copper nickel
tubes, expansion tank

Exhaust System
Watercooled exhaust manifold and elbow

Fuel System
Fuel filter — RH or LH service, fuel priming, fuel
transfer pump, flexible fuel lines

Generator
Single-phase — brushless, shunt excited,
4-pole, 4-lead reconnectable with class H insulation,
automatic voltage regulation ±0.5%, 2/3 pitch, IP23 water protection,
solid state voltage regulator with integral voltage adjustment
potentiometer, connection poles;

Three-phase — brushless, separately excited from
auxiliary winding, 4-pole, 12-lead reconnectable with
class H insulation, automatic voltage regulation
±0.5%, 2/3 pitch, IP23 water protection, solid state
voltage regulator with integral voltage adjustment
potentiometer, connection poles

Lube System
Lubricating oil, oil filter (RH), dipstick (RH), fumes
disposal (closed system)

Mounting System
Anti-vibration mounts, connected to drip tray and
steel base sitting on PVC foam sound-absorbent pad

Protection System
Electronic automatic safety shutdown for low oil
pressure, high water temperature, high exhaust (wet
exhaust only) temperature, and overspeed

Starting System
12 or 24 volt electronic starting motor, 12 volt 55 amp
alternator

General
Single-side service (RH), decals, literature

PERFORMANCE DATA

60 Hz
Fuel Consumption
@ Full Power 6.2-8.5 L/hour 1.64-2.25 gph

50 Hz
Fuel Consumption
@ Full Power 5.2-7.1 L/hour 1.37-1.88 gph

C2.2 Naturally Aspirated Ratings Chart

<table>
<thead>
<tr>
<th>Speed</th>
<th>Power Factor</th>
<th>Rating ekW</th>
<th>Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>0.8</td>
<td>17.5</td>
<td>318-1681</td>
</tr>
<tr>
<td>1500</td>
<td>1.0</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td>0.8</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td>1.0</td>
<td>21.5</td>
<td></td>
</tr>
</tbody>
</table>
RATING CONDITIONS

Ratings are based on SAE J1228/ISO8665 standard conditions of 100 kPa (29.61 in. Hg), 25°C (77°F), and 30% relative humidity. These ratings also apply at ISO3046/1, DIN6271/3, and BS5514 conditions of 100 kPa (29.61 in. Hg), 27°C (81°F), and 60% relative humidity.

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/L (7.001 lb/U.S. gal).

Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for additional information.

CATERPILLAR GENERATOR

Power Factor ......................... 1.0
Frame ................................. 2.2
Insulation ......................... Class H
Temperature Rise
@ 40°C Ambient ................ Class H (150°K)
Winding Pitch Code .................. 2/3
Terminals .................. 12 lead reconnectable
Drip Proof .............................. IP 23
Air Flow 60 Hz ...................... 0.44 m³/s (932 cfm)
Excitation System ................. AREP
Voltage Regulation (steady state) .... ±0.5%
Total Harmonic Content LL/LN ...... <4%
Wave Form: NEMA=TIF ............ <40%
Wave Form: I.E.C.=THF ............. <2%