# Generator Set Data Sheet

| | |
|---|---|
| Model: | C125D6C |
| Frequency: | 60 Hz |
| Fuel type: | Diesel |
| KW rating: | 125 Standby<br>112.5 Prime |
| Emissions level: | EPA Tier 3, Stationary Emergency |

| | |
|---|---|
| Exhaust emission data sheet: | EDS-1254 |
| Exhaust emission compliance sheet: | EPA-1354 |
| Sound performance data sheet: | MSP-1304 |
| Cooling performance data sheet: | MCP-1404 |
| Prototype test summary data sheet: | PTS-451 |

## Fuel Consumption

| | Standby | | | | Prime | | | |
|---|---|---|---|---|---|---|---|---|
| | kW (kVA) | | | | kW (kVA) | | | |
| Ratings | 125 (156) | | | | 112.5 (141) | | | |
| Load | 1/4 | 1/2 | 3/4 | Full | 1/4 | 1/2 | 3/4 | Full |
| US gph | 3.30 | 6.10 | 8.30 | 10.30 | 3.00 | 5.60 | 8.40 | 9.30 |
| L/hr | 12.49 | 23.09 | 31.42 | 38.99 | 11.36 | 21.20 | 31.80 | 35.20 |

## Engine

| | Standby rating | Prime rating |
|---|---|---|
| Engine manufacturer | Cummins Inc. | |
| Engine model | QSB5-G6 | |
| Configuration | Cast iron, in-line, 4 cylinder | |
| Aspiration | Turbocharged and charge air cooled | |
| Gross engine power output, kWm (bhp) | 155 (208) | 136 (183) |
| BMEP at set rated load, kPa (psi) | 2317 (336) | 2041 (296) |
| Bore, mm (in) | 107 (4.21) | |
| Stroke, mm (in) | 124 (4.88) | |
| Rated speed, rpm | 1800 | |
| Piston speed, m/s (ft/min) | 7.44 (1464) | |
| Compression ratio | 17.3:1 | |
| Lube oil capacity, L (qt) | 12.2 (12.9) | |
| Overspeed limit, rpm | 2250 | |

## Fuel Flow

| | |
|---|---|
| Maximum fuel flow, L/hr (US gph) | 95 (25.0) |
| Maximum fuel inlet restriction with clean filter, mm Hg (in Hg) | 127 (5.0) |

## Air

| | Standby rating | Prime rating |
|---|---|---|
| Combustion air, m3/min (scfm) | 10.42 (368) | 10.48 (370) |
| Maximum air cleaner restriction with clean filter, kPa (in H2O) | 1.25 (5) | |

## Exhaust

| | | |
|---|---|---|
| Exhaust flow at set rated load, $m^3$/min (cfm) | 25.6 (903) | 24.4 (861) |
| Exhaust temperature, °C (°F) | 528 (982) | 489 (913) |
| Maximum back pressure, kPa (in $H_2O$) | 10 (40.19) | 10 (40.19) |
| Actual exhaust back pressure with CPG sound level 2 enclosure muffler, kPa (in $H_2O$) | 0 (0) | 0 (0) |
| Actual exhaust back pressure with CPG weather enclosure muffler, kPa (in $H_2O$) | 0 (0) | 0.5 (2) |

## Standard Set-mounted Radiator Cooling

| | | |
|---|---|---|
| Ambient design, ° C (° F) | 40 (104) | |
| Fan load, $kW_m$ (HP) | 5.22 (7) | |
| Coolant capacity (with radiator), L (US Gal) | 16 (4.2) | |
| Cooling system air flow, $m^3$/min (scfm) | 218.04 (7700) | |
| Total heat rejection, MJ/min (Btu/min) | 14.17 (13429) | 13.06 (12382) |
| Maximum cooling air flow static restriction, kPa (in $H_2O$) | 0.12 (0.5) | |

## Weight[2]

| | |
|---|---|
| Unit wet weight kgs (lbs) | 1173 (2586) |

Notes:
[1] For non-standard remote installations contact your local Cummins Power Generation representative.
[2] Weights represent a set with standard features. See outline drawing for weights of other configurations.

## Derating Factors

| | |
|---|---|
| Standby | Engine power available up to 1097 m (3600 ft) and ambient temperatures up to 40° C (104° F). Above these conditions, derate at 35% per 300 m (1000 ft) and 53% per 10° C (18° F) |
| Prime | Engine power available up to 1158 m (3800 ft) and ambient temperatures up to 40° C (104° F). Above these conditions, derate at 35% per 300 m (1000 ft) and 58% per 10° C (18° F) |

## Ratings Definitions

| Emergency standby power (ESP): | Limited-time running power (LTP): | Prime power (PRP): | Base load (continuous) power (COP): |
|---|---|---|---|
| Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514. | Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528. | Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514. | Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514. |

## Alternator Data

| Standard Alternators | Single phase[2] | | Three phase[1] | | | |
|---|---|---|---|---|---|---|
| Maximum temperature rise above 40 °C ambient | 120 °C | 120 °C | 120 °C | 120 °C | 120 °C | 120 °C |
| Feature code | BB90-2 | B946-2 | B986-2 | B943-2 | B952-2 | BB86-2 |
| Alternator data sheet number | ADS-209 | ADS-208 | ADS-208 | ADS-208 | ADS-208 | ADS-208 |
| Voltage ranges | 120/240 | 120/208 | 120/240 | 277/480 | 347/600 | 127/220 |
| Voltage feature code | R104-2 | R098-2 | R106-2 | R002-2 | R114-2 | R020-2 |
| Surge kW | 137.8 | 141.8 | 141.8 | 143.5 | 143.5 | 142.6 |
| Motor starting kVA (at 90% sustained voltage) Shunt | | 516 | 516 | 422 | 422 | 516 |
| Motor starting kVA (at 90% sustained voltage) PMG | | 607 | 607 | 497 | 497 | 607 |
| Full load current amps at standby rating | 521 | 434 | 376 | 188 | 188 | 411 |

## Alternator Data

| Standard Alternators | Single phase[2] | Three phase[1] | | | | |
|---|---|---|---|---|---|---|
| Maximum temperature rise above 40 °C ambient | 105 °C | 105 °C | 105 °C | 105 °C | 105 °C | 105 °C |
| Feature code | BB91-2 | BB93-2 | BB94-2 | BB95-2 | BB92-2 | BB85-2 |
| Alternator data sheet number | ADS-209 | ADS-209 | ADS-209 | ADS-208 | ADS-208 | ADS-209 |
| Voltage ranges | 120/240 | 120/208 | 120/240 | 277/480 | 347/600 | 127/220 |
| Voltage feature code | R104-2 | R098-2 | R106-2 | R002-2 | R114-2 | R020-2 |
| Surge kW | 137.8 | 143.5 | 143.5 | 143.5 | 143.5 | 143.8 |
| Motor starting kVA (at 90% sustained voltage) Shunt | | 516 | 516 | 422 | 422 | 516 |
| Motor starting kVA (at 90% sustained voltage) PMG | | 607 | 607 | 497 | 497 | 607 |
| Full load current amps at standby rating | 521 | 434 | 376 | 188 | 150 | 411 |

Notes:
[1] Single phase power can be taken from a three phase generator set at up to 2/3 set rated 3-phase kW at 1.0 power factor
[2] Full single phase output up to full set rated 3-phase kW at 1.0 power factor

## Formulas for Calculating Full Load Currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

**Warning**: Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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