

Generator Set Data Sheet



Model: C3750 D5
Frequency: 50 Hz
Fuel Type: Diesel
kVA Rating: 3750 Standby
 3350 Prime
 3000 Continuous
Emissions Level: Unregulated

| Fuel Consumption | Standby | | | | Prime | | | | Continuous | | | |
|----------------------------------|--------------------------|-----|-----|------|-------------|-----|-----|------|-------------|-----|-----|------|
| | kVA (kW) | | | | kVA (kW) | | | | kVA (kW) | | | |
| Ratings | 3750 (3000) [†] | | | | 3350 (2680) | | | | 3000 (2400) | | | |
| Ratings without fan ¹ | 3848 (3078) | | | | 3448 (2758) | | | | 3098 (2478) | | | |
| Load | 1/4 | 1/2 | 3/4 | Full | 1/4 | 1/2 | 3/4 | Full | 1/4 | 1/2 | 3/4 | Full |
| US gph | 54 | 98 | 144 | 192 | 49 | 88 | 128 | 170 | 45 | 80 | 115 | 155 |
| L/hr | 204 | 371 | 545 | 727 | 185 | 333 | 484 | 643 | 170 | 303 | 435 | 587 |

¹Ratings for reference with the optional remote radiator cooling configuration. See note 1 under "Alternator data" section.

[†]DCC available at standby power subject to Cummins' site-specific assessment. Please contact your Cummins Distributor.

| Engine | Standby rating | Prime rating | Continuous rating |
|--------------------------------------|-------------------------------|--------------|-------------------|
| Engine model | QSK95-G4 | | |
| Configuration | Cast iron, vee, 16 cylinder | | |
| Aspiration | Turbocharged and after-cooled | | |
| Gross engine power output, kWm (bhp) | 3265 (4377) | 2903 (3892) | 2613 (3503) |
| BMEP at set rated load, kPa (psi) | 2737 (397) | 2434 (353) | 2193 (318) |
| Bore, mm (in) | 190.0 (7.48) | | |
| Stroke, mm (in) | 210.1 (8.27) | | |
| Rated speed, rpm | 1500 | | |
| Piston speed, m/s (ft/min) | 10.5 (2067) | | |
| Compression ratio | 15.5:1 | | |
| Lube oil capacity, L (qt) | 647 (684) | | |
| Overspeed limit, rpm | 1725 | | |
| Regenerative power, kW | 230 | | |

Fuel Flow

| | |
|---|--------------|
| Maximum fuel flow, L/hr (US gph) | 1392.9 (368) |
| Maximum fuel inlet restriction with clean filter, kPa (in Hg) | 30.48 (9) |
| Maximum fuel return line restriction kPa (in Hg) | 34 (10) |
| Maximum fuel inlet temperature, °C (°F) | 71.1 (160) |
| Maximum fuel outlet temperature, °C (°F) | 92.2 (198) |

Air

| | | | |
|--|------------|------------|------------|
| Combustion air, m ³ /min (scfm) | 250 (8820) | 236 (8331) | 222 (7839) |
| Maximum air cleaner restriction with clean filter, mm H ₂ O (in H ₂ O) | 457 (18) | | |
| Alternator cooling air, m ³ /min (cfm) | 240 (8476) | | |

| Exhaust | Standby rating | Prime rating | Continuous rating |
|---|-----------------------|---------------------|--------------------------|
| Exhaust flow at set rated load, m ³ /min (cfm) | 589 (20767) | 537 (18945) | 501 (17678) |
| Exhaust temperature at set rated load, °C (°F) | 419 (785) | 398 (748) | 392 (737) |
| Maximum back pressure, kPa (in H ₂ O) | 7 (28) | | |

| Set-Mounted Radiator Cooling | High Ambient | High Ambient Compact |
|--|---------------------|-----------------------------|
| Ambient design, °C (°F) | 43 (109) | 44 (111) |
| Fan load, kW _m (HP) | 78 (105) | 130 (175) |
| Coolant capacity (with radiator), L (US gal) | 1120 (296) | 1238 (327) |
| Cooling system air flow, m ³ /min (scfm) | 3135 (110700) | 2352 (83054) |
| Maximum cooling air flow static restriction, kPa (in H ₂ O) | 0.12 (0.5) | 0.12 (0.5) |

| Set-Mounted Radiator Cooling | Enhanced High Ambient |
|--|------------------------------|
| Ambient design, °C (°F) | 52 (126) |
| Fan load, kW _m (HP) | 78 (105) |
| Coolant capacity (with radiator), L (US gal) | 1120 (296) |
| Cooling system air flow, m ³ /min (scfm) | 3135 (110700) |
| Maximum cooling air flow static restriction, kPa (in H ₂ O) | 0.12 (0.5) |

| Optional Remote Radiator Cooling | | | |
|---|--------------|--------------|--------------|
| Engine coolant capacity, L (US gal) | 378.5 (100) | | |
| Max flow rate at max friction head, jacket water circuit, L/min (US gal/min) | 2419 (639) | | |
| Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min) | 579 (153) | | |
| Heat rejected, jacket water circuit, MJ/min (Btu/min) | 84.6 (80111) | 75.5 (71504) | 69.2 (65561) |
| Heat rejected, aftercooler circuit, MJ/min (Btu/min) | 20.7 (19583) | 18.0 (16971) | 15.5 (14665) |
| Heat rejected, fuel circuit, MJ/min (Btu/min) | 0.33 (309) | 0.33 (309) | 0.33 (309) |
| Total heat radiated to room, MJ/min (Btu/min) | 24.8 (23432) | 22.1 (20888) | 19.9 (18830) |
| Maximum friction head, jacket water circuit, kPa (psi) | 59 (8.5) | | |
| Maximum friction head, aftercooler circuit, kPa (psi) | 59 (8.5) | | |
| Maximum static head above engine crank centerline, jacket water circuit, m (ft) | 18 (60) | | |
| Maximum static head above engine crank centerline, aftercooler circuit, m (ft) | 18 (60) | | |
| Maximum jacket water outlet temp, °C (°F) | 110 (230) | 100 (212) | 100 (212) |
| Maximum aftercooler inlet temp, °C (°F) | 71.1 (160) | 68 (155) | 68 (155) |
| Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F) | 46.1 (115) | | |

Note: For non-standard remote installations contact your local Cummins representative.

Weights

| | |
|---------------------------|---------------|
| Unit dry weight kgs (lbs) | 28801 (63496) |
| Unit wet weight kgs (lbs) | 30668 (67611) |

Note: Weights represent a set with standard features and alternator frame S9. See outline drawing for weights of other configurations.

Derating Factors

| | |
|-------------------|---|
| Standby | <p>High Ambient Cooling System: Full genset power available up to 1090 m (3575 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 4% per 305 m (1000 ft) and 10.2% per 10 °C (18 °F).</p> <p>High Ambient Compact Cooling System: Full genset power available up to 575 m (1886 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 6.1% per 305 m (1000 ft) and 19.6% per 10 °C (18 °F).</p> <p>Enhanced High Ambient Cooling System: Full genset power available up to 1127 m (3698 ft) at ambient temperatures up to 40 °C (104 °F) and 750 m (2461 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 4% per 305 m (1000 ft) and 9.7% per 10 °C (18 °F).</p> |
| Prime | <p>High Ambient Cooling System: Full genset power available up to 1642 m (5386 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 4% per 305 m (1000 ft) and 13.8% per 10 °C (18 °F).</p> <p>Enhanced High Ambient Cooling System: Full genset power available up to 1765 m (5792 ft) at ambient temperatures up to 40 °C (104 °F) and 811 m (2661 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 4% per 305 m (1000 ft) and 12.7% per 10 °C (18 °F).</p> |
| Continuous | <p>High Ambient Cooling System: Full genset power available up to 2021 m (6629 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 5.9% per 305 m (1000 ft) and 19.2% per 10 °C (18 °F).</p> <p>Enhanced High Ambient Cooling System: Full genset power available up to 2124 m (6968 ft) at ambient temperatures up to 40 °C (104 °F) and 1296 m (4252 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 5.9% per 305 m (1000 ft) and 18.6% per 10 °C (18 °F).</p> |

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 data shown above represents gross engine performance and capabilities as per ISO 3046-1, obtained and corrected in accordance with ISO 15550. | 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 3046-1, obtained and corrected in accordance with ISO 15550. | Applicable for supplying power continuously to a constant load up to the full output rating for unlimited hours. No sustained overload capability is available for this rating. Consult authorized distributor for rating. (Equivalent to Continuous Power in accordance with ISO 8528 and ISO 3046-1, obtained and corrected in accordance with ISO 15550). This rating is not applicable to all generator set models. |

Alternator Data¹

| Voltage | Connection | Temp rise °C | Duty ² | Ambient temp C | Max surge kVA | Winding No. | Alternator | Feature code |
|-----------|--------------|--------------|-------------------|----------------|---------------|-------------|------------|--------------|
| 380 | Wye, 3-phase | 150/125/105 | S/P/C | 40 | 11145 | 12 | ADS-532 | B595-2 |
| 380-440 | Wye, 3-phase | 150/125 | S/P | 40 | 11146 | 12 | ADS-532 | B667-2 |
| 380 | Wye, 3-phase | 105 | P | 40 | 11145 | 12 | ADS-532 | B630-2 |
| 400 | Wye, 3-phase | 125 | S | 40 | 11146 | 12 | ADS-532 | BA63-2 |
| 400 | Wye, 3-phase | 105 | P | 40 | 11146 | 12 | ADS-532 | BA62-2 |
| 400-415 | Wye, 3-phase | 125 | P | 40 | 10132 | 12 | ADS-531 | B635-2 |
| 400 | Wye, 3-phase | 105 | C | 40 | 11146 | 12 | ADS-532 | BA61-2 |
| 415 | Wye, 3-phase | 125 | S | 40 | 11146 | 12 | ADS-532 | BA68-2 |
| 415 | Wye, 3-phase | 105 | P | 40 | 11146 | 12 | ADS-532 | BA66-2 |
| 415 | Wye, 3-phase | 105 | C | 40 | 11146 | 12 | ADS-532 | BA65-2 |
| 440 | Wye, 3-phase | 105 | C | 40 | 11025 | 12 | ADS-532 | BA71-2 |
| 440 | Wye, 3-phase | 105 | P | 40 | 11025 | 12 | ADS-532 | B658-2 |
| 690 | Wye, 3-phase | 125 | S | 40 | 11970 | 65 | ADS-586 | BA77-2 |
| 690 | Wye, 3-phase | 150 | S | 40 | 11970 | 65 | ADS-586 | BA78-2 |
| 690 | Wye, 3-phase | 105 | P | 40 | 11970 | 65 | ADS-586 | BA74-2 |
| 690 | Wye, 3-phase | 125 | P | 40 | 9960 | 65 | ADS-531 | BA76-2 |
| 690 | Wye, 3-phase | 80 | C | 40 | 11970 | 65 | ADS-586 | BA72-2 |
| 690 | Wye, 3-phase | 105 | C | 40 | 11970 | 65 | ADS-586 | BA73-2 |
| 3300 | Wye, 3-phase | 80 | S | 40 | 14880 | 8003 | ADS-592 | B620-2 |
| 3300 | Wye, 3-phase | 105 | S | 40 | 14043 | 851 | ADS-653 | BA80-2 |
| 3300 | Wye, 3-phase | 105 | P | 40 | 12276 | 851 | ADS-652 | B470-2 |
| 3300 | Wye, 3-phase | 125/80 | S/C | 40/50 | 14043 | 851 | ADS-653 | B470-2 |
| 3300 | Wye, 3-phase | 150 | S | 40 | 12276 | 851 | ADS-652 | BB78-2 |
| 3300 | Wye, 3-phase | 150 | S | 50 | 14043 | 851 | ADS-653 | BB78-2 |
| 3300 | Wye, 3-phase | 80 | P | 40 | 14043 | 851 | ADS-653 | BA79-2 |
| 3300 | Wye, 3-phase | 105 | P | 50 | 14043 | 851 | ADS-653 | B372-2 |
| 3300 | Wye, 3-phase | 125 | P | 40/50 | 12276 | 851 | ADS-652 | BB79-2 |
| 3300 | Wye, 3-phase | 105 | C | 40/50 | 12276 | 851 | ADS-652 | B471-2 |
| 6000 | Wye, 3-phase | 80 | S | 40 | 14170 | 8010 | ADS-591 | BA83-2 |
| 6000 | Wye, 3-phase | 105 | S | 40 | 12728 | 8008 | ADS-589 | BA86-2 |
| 6300/6600 | Wye, 3-phase | 80 | S | 40 | 14685 | 8009 | ADS-590 | B642-2 |
| 6300 | Wye, 3-phase | 105 | S | 40 | 13160 | 8007 | ADS-588 | B497-2 |
| 6300 | Wye, 3-phase | 125 | S | 40/50 | 14058 | 961 | ADS-661 | BA88-2 |
| 6300 | Wye, 3-phase | 80 | P | 40 | 13770 | 8008 | ADS-589 | B645-2 |
| 6300 | Wye, 3-phase | 105 | P | 40 | 12789 | 961 | ADS-660 | B498-2 |
| 6300 | Wye, 3-phase | 105 | P | 50 | 14058 | 961 | ADS-661 | B498-2 |
| 6300 | Wye, 3-phase | 80 | C | 40/50 | 14058 | 961 | ADS-661 | BA87-2 |
| 6300 | Wye, 3-phase | 105 | C | 40/50 | 12789 | 961 | ADS-660 | B482-2 |

Notes:

¹ Alternator data is configured for a set with ratings including engine cooling fan losses and standard features at 40 °C ambient temperature. For non-standard configurations, including remote radiator applications, check appropriate alternator data sheets or contact your local Cummins representative.

² Standby (S), Prime (P) and Continuous ratings (C).

³ Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

Alternator Data¹ (continued)

| Voltage | Connection | Temp rise °C | Duty ² | Ambient temp C | Max surge kVA | Winding No. | Alternator | Feature code |
|---------|--------------|--------------|-------------------|----------------|---------------|-------------|------------|--------------|
| 6600 | Wye, 3-phase | 105 | S | 40 | 14058 | 961 | ADS-661 | B679-2 |
| 6600 | Wye, 3-phase | 125 | S | 40 | 12789 | 961 | ADS-660 | BA91-2 |
| 6600 | Wye, 3-phase | 125 | S | 50 | 14058 | 961 | ADS-661 | BA91-2 |
| 6600 | Wye, 3-phase | 80 | P | 40 | 14175 | 8008 | ADS-589 | BA89-2 |
| 6600 | Wye, 3-phase | 105 | P | 40/50 | 12789 | 961 | ADS-660 | BA90-2 |
| 6600 | Wye, 3-phase | 80 | C | 40 | 12789 | 961 | ADS-660 | B828-2 |
| 6600 | Wye, 3-phase | 80 | C | 50 | 14058 | 961 | ADS-661 | B828-2 |
| 6600 | Wye, 3-phase | 105 | C | 40 | 11253 | 961 | ADS-659 | B793-2 |
| 6600 | Wye, 3-phase | 105 | C | 50 | 12789 | 961 | ADS-660 | B793-2 |
| 10k | Wye, 3-phase | 80 | S | 40 | 14399 | 8024 | ADS-591 | BA93-2 |
| 10k | Wye, 3-phase | 105 | S | 40 | 13500 | 8022 | ADS-589 | BA94-2 |
| 10k | Wye, 3-phase | 80 | P | 40 | 13500 | 8022 | ADS-589 | BA92-2 |
| 10.5k | Wye, 3-phase | 80 | S | 40 | 14240 | 8023 | ADS-590 | BA98-2 |
| 10.5k | Wye, 3-phase | 105 | S | 40 | 12784 | 8021 | ADS-588 | BB01-2 |
| 10.5k | Wye, 3-phase | 125 | S | 40 | 12784 | 8021 | ADS-588 | BB02-2 |
| 10.5k | Wye, 3-phase | 80 | P | 40 | 13770 | 8022 | ADS-589 | BA97-2 |
| 10.5k | Wye, 3-phase | 105 | P | 40 | 12294 | 983 | ADS-660 | BA99-2 |
| 10.5k | Wye, 3-phase | 105 | P | 50 | 13398 | 983 | ADS-661 | BA99-2 |
| 10.5k | Wye, 3-phase | 80 | C | 40 | 12784 | 8021 | ADS-588 | BA96-2 |
| 10.5k | Wye, 3-phase | 105 | C | 40/50 | 12294 | 983 | ADS-660 | B475-2 |
| 11k | Wye, 3-phase | 80 | S | 40 | 14685 | 8023 | ADS-590 | B624-2 |
| 11k | Wye, 3-phase | 105 | S | 40 | 11656 | 8021 | ADS-588 | B477-2 |
| 11k | Wye, 3-phase | 105 | P | 40 | 12294 | 983 | ADS-660 | B648-2 |
| 11k | Wye, 3-phase | 105 | P | 50 | 13398 | 983 | ADS-661 | B648-2 |
| 11k | Wye, 3-phase | 125/80 | S/C | 40/50 | 13398 | 983 | ADS-661 | B648-2 |
| 11k | Wye, 3-phase | 80 | P | 40 | 13770 | 8022 | ADS-589 | B985-2 |
| 11k | Wye, 3-phase | 105 | C | 40/50 | 12294 | 983 | ADS-660 | B478-2 |

Notes:

¹ Alternator data is configured for a set with ratings including engine cooling fan losses and standard features at 40 °C ambient temperature. For non-standard configurations, including remote radiator applications, check appropriate alternator data sheets or contact your local Cummins representative.

² Standby (S), Prime (P) and Continuous ratings (C).

³ Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

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