

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	3844 (3075)				3445 (2756)				3095 (2476)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	57	100	143	186	52	90	128	166	48	82	116	150
L/hr	216	379	541	704	197	341	484	628	182	310	439	568

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

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)	3213 (4307)	2851 (3822)	2562 (3434)
BMEP at set rated load, kPa (psi)	2696 (391)	2392 (347)	2151 (312)
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	2070		
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)	13.5 (4)
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, m³/min (scfm)	245 (8640)	228 (8050)	215 (7590)
Maximum air cleaner restriction with clean filter, mm H ₂ O (in H ₂ O)	457 (18)		
Alternator cooling air, m³/min (cfm)	240 (8476)		

Exhaust	Standby rating	Prime rating	Continuous rating
Exhaust flow at set rated load, m ³ /min (cfm)	546 (19290)	505 (17840)	473 (16690)
Exhaust temperature at set rated load, °C (°F)	404 (760)	392 (737)	381 (718)
Maximum back pressure, kPa (in H ₂ O)	7 (28)		

Standard set-mounted radiator cooling

Ambient design, °C (°F)	43 (109)
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 set-mounted radiator cooling

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)	379 (100)		
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)	2559 (676)		
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)	538 (142)		
Heat rejected, jacket water circuit, MJ/min (Btu/min)	78.80 (74730)	70.70 (67050)	64.20 (60900)
Heat rejected, aftercooler circuit, MJ/min (Btu/min)	19.60 (18560)	16.90 (15990)	14.70 (13940)
Heat rejected, fuel circuit, MJ/min (Btu/min)	0.24 (231)	0.21 (203)	0.19 (180)
Total heat radiated to room, MJ/min (Btu/min)	23.30 (22070)	20.70 (19660)	18.70 (17690)
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)	104.4 (220)	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)	29500 (65100)
Unit wet weight kgs (lbs)	31200 (68771)

Note: Weights represent a set with standard features and alternator frame P80X. See outline drawing for weights of other configurations.

Derating factors

Standby	Full genset power available up to 809 m (2654 ft) at ambient temperatures up to 40 °C (104 °F) and 702 m (2303 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 3.3% per 305 m (1000 ft) and 2% per 10 °C (18 °F).
Prime	Full genset power available up to 1451 m (4760 ft) at ambient temperatures up to 40 °C (104 °F) and 1023 m (3356 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 3.4% per 305 m (1000 ft) and 8% per 10 °C (18 °F).
Continuous	Full genset power available up to 2333 m (7654 ft) at ambient temperatures up to 40 °C (104 °F) and 1680 m (5512 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 3.7% per 305 m (1000 ft) and 8% 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 data¹

Voltage	Connection	Temp rise °C	Duty ²	Max surge kVA	Winding No.	Alternator	Feature code
380	Wye, 3-phase	150/125/105	S/P/C	11145	12	ADS-532	B595-2
380-440	Wye, 3-phase	150/125	S/P	11146	12	ADS-532	B667-2
380	Wye, 3-phase	105	P	11145	12	ADS-532	B630-2
400	Wye, 3-phase	125	S	11146	12	ADS-532	BA63-2
400	Wye, 3-phase	105	P	11146	12	ADS-532	BA62-2
400-415	Wye, 3-phase	125	P	10132	12	ADS-531	B635-2
400	Wye, 3-phase	105	C	11146	12	ADS-532	BA61-2
415	Wye, 3-phase	125	S	11146	12	ADS-532	BA68-2
415	Wye, 3-phase	105	P	11146	12	ADS-532	BA66-2
415	Wye, 3-phase	105	C	11146	12	ADS-532	BA65-2
440	Wye, 3-phase	105	C	11025	12	ADS-532	BA71-2
440	Wye, 3-phase	105	P	11025	12	ADS-532	B658-2
690	Wye, 3-phase	125	S	11970	65	ADS-586	BA77-2
690	Wye, 3-phase	150	S	11970	65	ADS-586	BA78-2
690	Wye, 3-phase	105	P	11970	65	ADS-586	BA74-2
690	Wye, 3-phase	125	P	9960	65	ADS-531	BA76-2
690	Wye, 3-phase	80	C	11970	65	ADS-586	BA72-2
690	Wye, 3-phase	105	C	11970	65	ADS-586	BA73-2
3300	Wye, 3-phase	80	S	14880	8003	ADS-592	B620-2
3300	Wye, 3-phase	105	S	10845	51	ADS-587	BA80-2
3300	Wye, 3-phase	125/105/80	S/P/C	10845	51	ADS-587	B470-2
3300	Wye, 3-phase	150	S	9481	51	ADS-545	BB78-2
3300	Wye, 3-phase	80	P	10845	51	ADS-587	BA79-2
3300	Wye, 3-phase	105	P	9481	51	ADS-545	B372-2
3300	Wye, 3-phase	125	P	9481	51	ADS-545	BB79-2
3300	Wye, 3-phase	105	C	10845	51	ADS-587	B471-2
6000	Wye, 3-phase	80	S	14170	8010	ADS-591	BA83-2
6000	Wye, 3-phase	105	S	12728	8008	ADS-589	BA86-2
6000	Wye, 3-phase	125	S	10463	71	ADS-534	BB80-2
6000	Wye, 3-phase	80	P	10463	71	ADS-534	BA82-2
6000	Wye, 3-phase	105	P	8866	71	ADS-533	BA85-2
6000	Wye, 3-phase	80	C	10463	71	ADS-534	BA81-2
6000	Wye, 3-phase	105	C	8866	71	ADS-533	BA84-2
6300/6600	Wye, 3-phase	80	S	14685	8009	ADS-590	B642-2
6300	Wye, 3-phase	105	S	13160	8007	ADS-588	B497-2
6300	Wye, 3-phase	125	S	10727	61	ADS-534	BA88-2
6300	Wye, 3-phase	80	P	13770	8008	ADS-589	B645-2
6300	Wye, 3-phase	105	P	10727	61	ADS-534	B498-2
6300	Wye, 3-phase	80	C	10727	61	ADS-534	BA87-2
6300	Wye, 3-phase	105	C	10727	61	ADS-534	B482-2

Alternator data¹ (continued)

Voltage	Connection	Temp rise °C	Duty ²	Max surge kVA	Winding No.	Alternator	Feature code
6600	Wye, 3-phase	105	S	10656	61	ADS-534	B679-2
6600	Wye, 3-phase	125	S	10656	61	ADS-534	BA91-2
6600	Wye, 3-phase	80	P	14175	8008	ADS-589	BA89-2
6600	Wye, 3-phase	105	P	9378	61	ADS-533	BA90-2
6600	Wye, 3-phase	80	C	10656	61	ADS-534	B828-2
6600	Wye, 3-phase	105	C	9378	61	ADS-533	B793-2
10k	Wye, 3-phase	80	S	14399	8024	ADS-591	BA93-2
10k	Wye, 3-phase	105	S	13500	8022	ADS-589	BA94-2
10k	Wye, 3-phase	125	S	10427	81	ADS-534	BA95-2
10k	Wye, 3-phase	80	P	13500	8022	ADS-589	BA92-2
10k	Wye, 3-phase	105	P	10427	81	ADS-534	B494-2
10k	Wye, 3-phase	80	C	10427	81	ADS-534	B794-2
10k	Wye, 3-phase	105	C	9125	81	ADS-533	B474-2
10.5k	Wye, 3-phase	80	S	14240	8023	ADS-590	BA98-2
10.5k	Wye, 3-phase	105	S	12784	8021	ADS-588	BB01-2
10.5k	Wye, 3-phase	125	S	12784	8021	ADS-588	BB02-2
10.5k	Wye, 3-phase	80	P	13770	8022	ADS-589	BA97-2
10.5k	Wye, 3-phase	105	P	10665	83	ADS-534	BA99-2
10.5k	Wye, 3-phase	80	C	12784	8021	ADS-588	BA96-2
10.5k	Wye, 3-phase	105	C	9333	83	ADS-533	B475-2
11k	Wye, 3-phase	80	S	14685	8023	ADS-590	B624-2
11k	Wye, 3-phase	105	S	11656	8021	ADS-588	B477-2
11k	Wye, 3-phase	125/105/80	S/P/C	10613	83	ADS-534	B648-2
11k	Wye, 3-phase	80	P	13770	8022	ADS-589	B985-2
11k	Wye, 3-phase	105	C	9288	83	ADS-533	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.

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.