

Generator set data sheet



Model: C3500 D6e
Frequency: 60 Hz
Fuel type: Diesel
kVA rating: 3500 Standby
 3000 Prime
 2750 Continuous
Emissions level: EPA NSPS Stationary Emergency Tier 2

Fuel consumption	Standby				Prime				Continuous			
	kW (kVA)				kW (kVA)				kW (kVA)			
Ratings	3500 (4375) †				3000 (3750)				2750 (3438)			
Ratings without fan ¹	3611 (4514)				3111 (3889)				2861 (3576)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	74	131	183	240	65	115	158	205	62	107	147	190
L/hr	280	496	693	908	246	435	598	776	235	405	556	719

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-G9		
Configuration	Cast iron, vee, 16 cylinder		
Aspiration	Turbocharged and after-cooled		
Gross engine power output, kWm (bhp)	3768 (5051)	3215 (4309)	2956 (3963)
BMEP at set rated load, kPa (psi)	2634 (382)	2248 (326)	2068 (300)
Bore, mm (in)	190.0 (7.48)		
Stroke, mm (in)	210.1 (8.27)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/min)	12.6 (2480)		
Compression ratio	15.5:1		
Lube oil capacity, L (qt)	647 (684)		
Overspeed limit, rpm	2070		
Regenerative power, kW	321		

Fuel flow

Maximum fuel flow, L/hr (US gph)	1601.1 (423)
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, m³/min (scfm)	283 (9979)	274 (9649)	268 (9441)
Maximum air cleaner restriction with clean filter, mm H ₂ O (in H ₂ O)	508 (20)		
Alternator cooling air, m³/min (cfm)	255 (9005)		

Exhaust	Standby rating	Prime rating	Continuous rating
Exhaust flow at set rated load, m³/min (cfm)	720 (25408)	650 (22925)	619 (21829)
Exhaust temperature at set rated load, °C (°F)	495 (923)	443 (828)	423 (792)
Maximum back pressure, kPa (in H ₂ O)	7 (28)		

Set-mounted radiator cooling	High Ambient
Ambient design, °C (°F)	47 (117)
Fan load, kW _m (HP)	111 (149)
Coolant capacity (with radiator), L (US gal)	1120 (296)
Cooling system air flow, m³/min (scfm)	4098 (144710)
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.12 (0.5)

Set-mounted radiator cooling	Enhanced High Ambient
Ambient design, °C (°F)	53 (127)
Fan load, kW _m (HP)	111 (149)
Coolant capacity (with radiator), L (US gal)	1196 (316)
Cooling system air flow, m³/min (scfm)	4098 (144710)
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)	2907 (768)		
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)	697 (184)		
Heat rejected, jacket water circuit, MJ/min (Btu/min)	107.8 (102092)	93.1 (88171)	85.4 (80943)
Heat rejected, aftercooler circuit, MJ/min (Btu/min)	25.1 (23731)	21.7 (20491)	20.9 (19753)
Heat rejected, fuel circuit, MJ/min (Btu/min)	0.6 (513)	0.6 (513)	0.6 (513)
Total heat radiated to room, MJ/min (Btu/min)	30.3 (28716)	26.0 (24565)	24.0 (22696)
Maximum friction head, jacket water circuit, kPa (psi)	83 (12)		
Maximum friction head, aftercooler circuit, kPa (psi)	83 (12)		
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 (160)	68 (155)	68 (155)
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)	46 (115)		

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

Weights	
Unit dry weight kgs (lbs)	30005 (66150)
Unit wet weight kgs (lbs)	30800 (67902)

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

Derating factors

Standby	High Ambient Cooling System: Full genset power available up to 767 m (2516 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 5.2% per 305 m (1000 ft) and 12.5% per 10 °C (18 °F). Enhanced High Ambient Cooling System: Full genset power available up to 789 m (2590 ft) at ambient temperatures up to 40 °C (104 °F) and 457 m (1500 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 5.1% per 305 m (1000 ft) and 12.4% per 10 °C (18 °F).
Prime	High Ambient Cooling System: Full genset power available up to 1056 m (3464 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 5.3% per 305 m (1000 ft) and 14.4% per 10 °C (18 °F). Enhanced High Ambient Cooling System: Full genset power available up to 1079 m (3540 ft) at ambient temperatures up to 40 °C (104 °F) and 683 m (2242 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 5.3% per 305 m (1000 ft) and 13.2% per 10 °C (18 °F).
Continuous	High Ambient Cooling System: Full genset power available up to 744 m (2442 ft) at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate at 5.4% per 305 m (1000 ft) and 10.3% per 10 °C (18 °F). Enhanced High Ambient Cooling System: Full genset power available up to 779 m (2555 ft) at ambient temperatures up to 40 °C (104 °F) and 301 m (988 ft) at ambient temperatures up to 50 °C (122 °F). Above these conditions, derate at 5.4% per 305 m (1000 ft) and 8.5% 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 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
600	Wye, 3 phase	125C	S	40	14343	607	ADS-683	B465-2
600	Wye, 3 phase	105C	P	40	14343	607	ADS-683	B465-2
600	Wye, 3 phase	80C	C	40	14343	607	ADS-683	B465-2
480	Wye, 3 phase	125C	S	40	14310	312	ADS-683	B801-2
480	Wye, 3 phase	150C	S	40	13290	312	ADS-682	B682-2
480	Wye, 3 phase	125C	P	40	13290	312	ADS-682	B682-2
480	Wye, 3 phase	125C	S	50	15825	312	ADS-684	B801-2
600	Wye, 3 phase	125C	S	50	15300	607	ADS-684	B465-2
600	Wye, 3 phase	105C	P	50	15300	607	ADS-684	B465-2
600	Wye, 3 phase	80C	C	50	15300	607	ADS-684	B465-2
480	Wye, 3 phase	125C	P	50	14310	312	ADS-683	B682-2
4160	Wye, 3-phase	105/80	S/P	40/50	17127	851	ADS-653	B937-2
4160	Wye, 3-phase	125/105/80	S/P/C	40	14835	851	ADS-652	B467-2
4160	Wye, 3-phase	105	P	50	14835	851	ADS-652	B467-2
4160	Wye, 3-phase	125/80	S/C	50	17127	851	ADS-653	B467-2
4160	Wye, 3-phase	150	S	40/50	14835	851	ADS-652	BE31-2

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
12470	Wye, 3-phase	105/80	S/P	40	N/A	8030	ADS-590	B567-2
12470	Wye, 3-phase	105	C	40	13908	991	ADS-660	B569-2
12470	Wye, 3-phase	105	C	50	15180	991	ADS-661	B569-2
13.2-13.8	Wye, 3-phase	105	C	40/50	13908	991	ADS-660	B657-2
13800	Wye, 3-phase	105	S	40	16688	8029	ADS-589	B895-2
13800	Wye, 3-phase	125	S	40	15180	991	ADS-661	B820-2
13800	Wye, 3-phase	80	P	40	16688	8029	ADS-589	B809-2
13800	Wye, 3-phase	105	P	40	13908	991	ADS-660	B821-2
13800	Wye, 3-phase	105	P	50	15180	991	ADS-661	B821-2

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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.

For more information contact your local Cummins distributor
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