

**Model: DQLB**  
**Frequency: 50**  
**Fuel type: Diesel**

➤ **Generator set data sheet**  
**1935 - 2660 kW**



**Power  
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<b>Exhaust emission data sheet:</b>	<b>EDS-1009</b>
<b>Emission compliance sheet:</b>	<b>EPA-1062</b>
<b>Sound performance data sheet:</b>	
<b>Cooling performance data sheet:</b>	<b>MCP-124</b>
<b>Prototype test summary data sheet:</b>	<b>PTS-254</b>
<b>Remote radiator cooling outline:</b>	<b>0500-3562</b>
<b>40 °C locally mounted radiator cooling outline:</b>	<b>0500-3694</b>
<b>50 °C locally mounted radiator cooling outline:</b>	<b>0500-3564</b>

<b>Fuel consumption</b>	<b>Standby</b>				<b>Prime</b>				<b>Continuous</b>
	<b>kW (kVA)</b>				<b>kW (kVA)</b>				<b>kW (kVA)</b>
<b>Remote cooling system ratings</b>	2660 (3300)				2400 (3000)				2000 (2500)
<b>40 °C locally mounted radiator cooling system ratings</b>	2600 (3250)				2340 (2925)				1940 (2425)
<b>50 °C locally mounted radiator cooling system ratings</b>	2595 (3245)				2335 (2920)				1935 (2420)
<b>Load</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>Full</b>
<b>US gph</b>	51	92	132	174	48	84	120	156	132
<b>L/hr</b>	195	350	500	662	181	320	457	592	500

<b>Engine</b>	<b>Standby rating</b>		<b>Prime rating</b>	<b>Continuous rating</b>
Engine manufacturer	Cummins Inc.			
Engine model	QSK78-G6			
Configuration	Cast Iron, 60°V 18 cylinder			
Displacement, L (cu in)	77.6 (4735)			
Aspiration	Turbocharged and low temperature aftercooled			
Gross engine power output, kWm (bhp)	2790 (3740)		2515 (3371)	2115 (2835)
BMEP at set rated load, kPa (psi)	2397 (348)		2160 (313)	1817 (263)
Bore, mm (in)	170.0 (6.69)			
Stroke, mm (in)	190.0 (7.48)			
Rated speed, rpm	1800			
Piston speed, m/s (ft/min)	11.4 (2243)			
Compression ratio	15.3:1			
Lube oil capacity, L (qt)	295 (312)		465 (492)	465 (492)
Overspeed limit, rpm	2030			
Regenerative power, kW	266			

<b>Fuel flow</b>	<b>Standby rating</b>	<b>Prime rating</b>	<b>Continuous rating</b>
Maximum fuel flow, L/hr (US gph)	2225 (590)		
Maximum fuel inlet restriction, kPa (in Hg)	8.4 (2.5)		
Maximum fuel inlet temperature, °C (°F)	70 (160)		

<b>Air</b>			
Combustion air, m <sup>3</sup> /min (scfm)	227 (8000)	210 (7400)	179 (6300)
Maximum air cleaner restriction, kPa (in H <sub>2</sub> O)	6.2 (25)		
Alternator cooling air, m <sup>3</sup> /min (cfm)	282 (9958)		

<b>Exhaust</b>			
Exhaust gas flow at set rated load, m <sup>3</sup> /min (cfm)	522 (18465)	487 (17225)	433 (15310)
Exhaust gas temperature at set rated load, °C (°F)	451 (845)	434 (820)	413 (775)
Maximum exhaust back pressure, kPa (in H <sub>2</sub> O)	6.7 (27)		

<b>40 °C locally mounted radiator cooling</b>			
Ambient design, °C (°F)	40 (104)		
Fan load, kW <sub>m</sub> (HP)	60 (80)		
Coolant capacity (with radiator), L (US gal)	729 (192)		
Cooling system air flow, m <sup>3</sup> /min (scfm)	2520 (88992)		
Total heat rejection, MJ/min (Btu/min)	98 (99163)		
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	1.69 (0.5)		

<b>50 °C locally mounted radiator cooling</b>			
Ambient design, °C (°F)	50 (122)		
Fan load, kW <sub>m</sub> (HP)	63 (84)		
Coolant capacity (with radiator), L (US gal)	716 (189)		
Cooling system air flow, m <sup>3</sup> /min (scfm)	2904 (102553)		
Total heat rejection, MJ/min (Btu/min)	98 (99163)		
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	1.69 (0.5)		

<b>Remote radiator cooling<sup>1</sup></b>			
Set coolant capacity, L (US gal)	223 (59)		
Max flow rate @ max friction head, jacket water circuit, L/min (US gal/min)	2220 (590)		
Max flow rate @ max friction head, aftercooler circuit, L/min (US gal/min)	996 (263)		
Heat rejected, jacket water circuit, MJ/min (Btu/min)	56.6 (53765)	52.3 (49560)	46.8 (44230)
Heat rejected, aftercooler circuit, MJ/min (Btu/min)	41.8 (39725)	36.8 (34935)	28.8 (27260)
Heat rejected, fuel circuit, MJ/min (Btu/min)	2.6 (2500)		
Total heat radiated to room, MJ/min (Btu/min)	20.8 (19750)	19.3 (18365)	17.2 (16310)
Maximum friction head, jacket water circuit, kPa (psi)	69 (10)		
Maximum friction head, aftercooler circuit, kPa (psi)	48 (7)		
Maximum static head, jacket water circuit, m (ft)	18.3 (60)		
Maximum static head, aftercooler circuit, m (ft)	18.3 (60)		
Maximum jacket water outlet temp, °C (°F)	104 (220)	100 (212)	100 (212)
Maximum aftercooler inlet temp @ 25 °C (77 °F) ambient, °C (°F)	49 (120)		
Maximum aftercooler inlet temp, °C (°F)	65 (150)		
Maximum fuel flow, L/hr (US gph)	2225 (590)		
Maximum fuel return line restriction, kPa (in Hg)	30.5 (9)		

<sup>1</sup> For non-standard remote installations contact your local Cummins Power Generation representative.

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## Weights<sup>2</sup>

Unit dry weight kgs (lbs)	25157 (55461)
Unit wet weight kgs (lbs)	25800 (56879)

<sup>2</sup> Weights represent a set with standard features. See outline drawing for weights of other configurations

## Derating factors

<b>Standby</b>	Engine power available up to 1030 m (3378 ft) at ambient temperatures up to 40 °C (104 °F) and up to 460 m (1508 ft) at 50 °C (122 °F). Above these conditions, derate at 4.2% per 305 m (1000 ft) and 11.6% per 10 °C (18°F).
<b>Prime</b>	Engine power available up to 1030 m (3378 ft) at ambient temperatures up to 40 °C (104 °F) and up to 460 m (1508 ft) at 50 °C (122 °F). Above these conditions, derate at 4.2% per 305 m (1000 ft) and 11.6% per 10 °C (18°F).
<b>Continuous</b>	Engine power available up to 1120 m (3674 ft) at ambient temperatures up to 40 °C (104 °F) and up to 75 m (246 ft) at 50 °C (122 °F). Above these conditions, derate at 5.2% per 305 m (1000 ft) and 25.8% per 10 °C (18 °F).

## Ratings definitions

<b>Emergency standby power (ESP):</b>	<b>Limited-time running power (LTP):</b>	<b>Prime power (PRP):</b>	<b>Base load (continuous) power (COP):</b>
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.

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## Alternator data

Voltage	Connection <sup>1</sup>	Temp rise degrees C	Duty <sup>2</sup>	Single phase factor <sup>3</sup>	Max surge kVA <sup>4</sup>	Winding No.	Alternator data sheet	Feature Code
380-440	Wye, 3-phase	150/105	S/P/C		7900	312	ADS-502	B444
380-440	Wye, 3-phase	125/105	S/P		9100	312	ADS-503	B360
380-440	Wye, 3-phase	125	C		6900	312	ADS-502	B584
380-415	Wye, 3-phase	105	C		6900	312	ADS-503	B585
380-415	Wye, 3-phase	105	P		7900	312	ADS-504	B586
1905-3300	Wye, 3-phase	125	C		5300	51	ADS-507	B580
1905-3300	Wye, 3-phase	105	C		5300	51	ADS-507	B471
1905-3300	Wye, 3-phase	105	P		6300	51	ADS-508	B372
1905-3300	Wye, 3-phase	125/105	P/C		6300	51	ADS-508	B579
1905-3300	Wye, 3-phase	125/105	S/P		7200	51	ADS-509	B578
6300-6600	Wye, 3-phase	105	C		6100	61	ADS-512	B576
6300-6600	Wye, 3-phase	125/105	P/C		7100	61	ADS-513	B574
6300-6600	Wye, 3-phase	125	C		6100	61	ADS-512	B577
6300-6600	Wye, 3-phase	125/105	C		8300	61	ADS-514	B575
11k	Wye, 3-phase	125	C		6000	83	ADS-512	B573
11k	Wye, 3-phase	125/105	P/C		6900	83	ADS-513	B572
11k	Wye, 3-phase	125/105	S/P		7900	83	ADS-514	B476

### Notes:

<sup>1</sup> Single phase power can be taken from three phase generator sets at up to the value listed in the single phase factor column for the generator set nameplate kW rating at unity power factor.

<sup>2</sup> Standby (S), Prime (P) and Continuous ratings (C).

<sup>3</sup> Factor for the *Single Phase Output from Three Phase Alternator* formula listed below.

<sup>4</sup> Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

## 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

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

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Important: 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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