

Generator set data sheet

Model:	DQLE
Frequency:	60
Fuel type:	Diesel
KW rating:	2275 Data Center Continuous
Emissions level:	EPA NSPS Stationary Emergency Tier 2

Exhaust emission data sheet:	EDS-1116
Exhaust emission compliance sheet:	EPA-1174
Sound performance data sheet:	MSP-1099
Cooling performance data sheet:	MCP-203
Prototype test summary data sheet:	PTS-299
Remote radiator cooling outline:	A049A843
High ambient air temperature radiator cooling outline (ship loose):	A049A845
Enhanced high ambient cooling system outline (ship loose):	A049A847

Fuel consumption	kW (kVA)			
	1/4	1/2	3/4	Full
Ratings	2275 (2844)			
US gph	56	89	122	155
L/hr	231	337	462	587

Engine

Engine manufacturer	Cummins Inc.
Engine model	QSK78-G12
Configuration	Cast Iron, V 18 cylinder
Aspiration	Turbocharged and low temperature aftercooled
Gross engine power output, kWm (bhp)	2737 (3670)
BMEP at set rated load, kPa (psi)	2151 (312)
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	15.5:1
Lube oil capacity, L (qt)	413 (436)
Overspeed limit, rpm	2100
Regenerative power, kW	266

Fuel flow

Maximum fuel flow, L/hr (US gph)	2234 (590)
Maximum fuel restriction at injection pump with clean filter, kPa (in Hg)	17 (5)
Maximum fuel inlet temperature, °C (°F)	71 (160)

Air

Combustion air, m ³ /min (scfm)	218 (7687)
Maximum air cleaner restriction, kPa (in H ₂ O)	3.7 (15)
Alternator cooling air, m ³ /min (cfm)	178 (6278)

Exhaust

Exhaust flow at set rated load, m ³ /min (cfm)	506 (17863)
Exhaust temperature, °C (°F)	448 (838)
Maximum back pressure, kPa (in H ₂ O)	7 (28)

High ambient air temperature radiator cooling (ship loose)

Ambient design °C (°F)	40 (104)
Fan load kWm (hp)	90 (121)
Cooling capacity (with radiator), L (US gal)	738 (195)
Cooling system air flow, m ³ /min (scfm)	3060 (108000)
Total heat rejection, MJ/min (Btu/min)	88.2 (83621)
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.12 (0.5)

Enhanced high ambient air temperature radiator cooling (ship loose)

Ambient design, °C (°F)	53 (127)
Fan load, kW _m (HP)	107 (144)
Coolant capacity (with radiator), L (US gal)	1061 (280)
Cooling system air flow, m ³ /min (scfm)	4560 (16100)
Total heat rejection, MJ/min (Btu/min)	88.2 (83621)
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.12 (0.5)

Remote radiator cooling¹

Set coolant capacity, L (US gal)	223 (59)
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)	2222 (587)
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)	988 (261)
Heat rejected, jacket water circuit, MJ/min (Btu/min)	48.3 (45776)
Heat rejected, aftercooler circuit, MJ/min (Btu/min)	37.3 (35345)
Heat rejected, fuel circuit, MJ/min (Btu/min)	2.6 (2500)
Total heat radiated to room, MJ/min (Btu/min)	19.4 (18404)
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)
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)	49 (120)
Maximum aftercooler inlet temp, °C (°F)	66 (150)
Maximum fuel flow, L/hr (US gph)	2234 (590)
Maximum fuel return line restriction, kPa (in Hg)	34 (10)

¹ For non-standard remote installations contact your local Cummins Power Generation representative.

Weights²

Unit dry weight kgs (lbs)	23210 (51166)
Unit wet weight kgs (lbs)	24238 (53433)

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

Derating factors

Standard Cooling System: Full rated power available up to 1744 m (5721 ft) elevation at ambient temperatures up to 40 °C (104 °F). Above these conditions, derate by 7.5% per 305m (1000 ft), and derate by an additional 17.8% per 10 °C (18 °F).

Enhanced Cooling System: Full rated power available up to 1906 m (6252 ft) at ambient temperatures up to 40 °C (104 °F). Above this elevation, at 40 °C (104 °F), derate by 7.5% per 305m (1000 ft). Full rated power available up to 1053 m (3454 ft) elevation at ambient temperatures up to 50 °C (122 °F). Above this elevation, at 50 °C (122 °F), derate by 7.5% per 305m (1000 ft). At higher ambient temperatures, derate by an additional 21.3% per 10 °C (18 °F).

Remote Radiator Cooling Option: Full rated power available up to 1042 m (3419 ft) elevation at ambient temperature up to 40 °C (104 °F). Above these elevations, at 40 °C (104 °F), derate by 8.25% per 305 m (1000 ft). Full rated power available up to 259 m (851 ft) elevation at ambient temperatures up to 50 °C (122 °F). Above these elevations, at 50 °C (122 °F), derate by 8.25% per 305 m (1000 ft). At higher ambient temperatures, derate by an additional 21.2% per 10 °C (18 °F).

Ratings definitions

Data Center Continuous (DCC)®: Applicable for supplying power continuously to a constant or varying electrical load for unlimited hours in a data center application.

Alternator data

Voltage	Connection	Temp rise degrees C	Duty ¹	Max surge kVA ²	Winding No.	Alternator data sheet	Feature Code
440	Wve	150	S/P/C	8412	12	ADS-516	B813-2
440	Wve	125	S/P/C	9719	12	ADS-517	B663-2
440	Wve	105	S/P	13024	12	ADS-531	B664-2
480	Wve	125	S/P/C	8412	12	ADS-516	B801-2
347/600	Wve	125	S/P/C	8189	7	ADS-516	B602-2
13200	Wve	125	S/P	7993	91	ADS-523	B819-2
12470	Wve	80	P	11213	91	ADS-533	B812-2
2400/4160	Wve	150	S/P/C	6335	51	ADS-518	B938-2

Notes:

¹ Standby (S), Prime (P) and Continuous ratings (C).

² Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

Formulas for calculating full load currents:

$$\frac{\text{Three phase output}}{\text{Voltage} \times 1.73 \times 0.8} = \frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

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.

North America
1400 73rd Avenue N.E.
Minneapolis, MN 55432
USA

Phone 763 574 5000
Fax 763 574 5298

Our energy working for you.™

©2016 Cummins Power Generation Inc. All rights reserved.

Cummins Power Generation and Cummins are registered trademarks of Cummins Inc. PowerCommand, AmpSentry, InPower and "Our energy working for you." are trademarks of Cummins Power Generation. Other company, product, or service names may be trademarks or service marks of others. Specifications are subject to change without notice.

D-3507g-DC (3/16)



power.cummins.com