

Model: DQHAB  
 Frequency: 60  
 Fuel type: Diesel  
 KW rating: 300 standby  
 270 prime  
 Emissions level: EPA NSPS Stationary Emergency Tier 3

† Generator set data sheet



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Exhaust emission data sheet:	EDS-1082
Exhaust emission compliance sheet:	EPA-1116
Sound performance data sheet:	MSP-1054
Cooling performance data sheet:	MCP-169
Prototype test summary data sheet:	PTS-277
Standard set-mounted radiator cooling outline:	0500-4645
Optional set-mounted radiator cooling outline:	
Optional heat exchanger cooling outline:	
Optional remote radiator cooling outline:	

Fuel consumption	Standby				Prime				Continuous
	kW (kVA)				kW (kVA)				kW (kVA)
Ratings	300 (375)				270 (338)				
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	Full
US gph	6.67	11.57	17.12	23.15	6.28	10.66	15.51	20.66	
L/hr	25.25	43.80	64.81	87.63	23.77	40.35	58.71	78.21	

Engine	Standby rating	Prime rating	Continuous rating
Engine manufacturer	Cummins Inc.		
Engine model	QSM11-G4		
Configuration	Cast iron, in-line 6 cylinder		
Aspiration	Turbocharged, EGR and CAC		
Gross engine power output, kWm (bhp)	350 (470)	318 (427)	
BMEP at set rated load, kPa (psi)	2165 (314)	1965 (285)	
Bore, mm (in)	125 (4.92)		
Stroke, mm (in)	147.1 (5.79)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/min)	0.88 (17.37)		
Compression ratio	17:1		
Lube oil capacity, L (qt)	36.72 (38.8)		
Overspeed limit, rpm	2100 ± 50		
Regenerative power, kW	30.6		

Fuel flow		
Fuel flow at rated load, L/hr (US gph)	284 (75)	
Maximum inlet restriction, mm Hg (in Hg)	102 (4)	
Maximum return restriction, mm Hg (in Hg)	64 (2.5)	

Air	Standby rating	Prime rating	Continuous rating
Combustion air, m <sup>3</sup> /min (scfm)	24.54 (866.82)	23.06 (814.59)	
Maximum air cleaner restriction, kPa (in H <sub>2</sub> O)	6.2 (25.0)		
Alternator cooling air, m <sup>3</sup> /min (scfm)	35.1 (1240.0)		

## Exhaust

Exhaust flow at set rated load, m <sup>3</sup> /min (cfm)	66.4 (2345)	60.46 (2135)	
Exhaust temperature, °C (°F)	543.8 (1011)	513 (955)	
Maximum back pressure, kPa (in H <sub>2</sub> O)	10.15 (40.8)	8.46 (34.0)	

## Standard set-mounted radiator cooling

Ambient design, °C (°F)	52 (125)		
Fan load, kW <sub>m</sub> (HP)	20.1 (27)		
Coolant capacity (with radiator), L (US gal)	33.7 (8.9)		
Cooling system air flow, m <sup>3</sup> /min (scfm)	707.5 (25000)		
Total heat rejection, MJ/min (Btu/min)	13.21 (12524)	10.68 (10133)	
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	0.12 (0.5)		

## Optional set-mounted radiator cooling

Ambient design, °C (°F)			
Fan load, kW <sub>m</sub> (HP)			
Coolant capacity (with radiator), L (US gal)			
Cooling system air flow, m <sup>3</sup> /min (scfm)			
Total heat rejection, MJ/min (Btu/min)			
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)			

## Optional heat exchanger cooling

Set coolant capacity, L (US gal)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum raw water pressure, jacket water circuit, kPa (psi)			
Maximum raw water pressure, aftercooler circuit, kPa (psi)			
Maximum raw water pressure, fuel circuit, kPa (psi)			
Maximum raw water flow, jacket water circuit, L/min (US gal/min)			
Maximum raw water flow, aftercooler circuit, L/min (US gal/min)			
Maximum raw water flow, fuel circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, jacket water circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, aftercooler circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, fuel circuit, L/min (US gal/min)			
Raw water delta P at min flow, jacket water circuit, kPa (psi)			
Raw water delta P at min flow, aftercooler circuit, kPa (psi)			
Raw water delta P at min flow, fuel circuit, kPa (psi)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			

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## Optional remote radiator cooling<sup>1</sup>

	Standby rating	Prime rating	Continuous rating
Set coolant capacity, L (US gal)			
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)			
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum friction head, jacket water circuit, kPa (psi)			
Maximum friction head, aftercooler circuit, kPa (psi)			
Maximum static head, jacket water circuit, m (ft)			
Maximum static head, aftercooler circuit, m (ft)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum fuel flow, L/hr (US gph)			
Maximum fuel return line restriction, kPa (in Hg)			

## Weights<sup>2</sup>

Unit dry weight kgs (lbs)	2676 (5900)
Unit wet weight kgs (lbs)	2762 (6090)

Notes:

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

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

## Derating factors

Standby	Engine power available up to 875 m (2870 ft) at ambient temperature up to 40 °C (104 °F) or up to 400 m (1312 ft) at ambient temperatures up to 50 °C (122 °F). For operation above these conditions, derate at 4% per 300 m (984 ft), and 10% per 10 °C (18 °F).
Prime	Engine power available up to 1000 m (3280 ft) at ambient temperature up to 40 °C (104 °F) or up to 325 m (1066 ft) at ambient temperatures up to 50 °C (122 °F). For operation above these conditions, derate at 4% per 300 m (984 ft), and 10% per 10 °C (18 °F).
Continuous	

## 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.

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## Alternator data

Three phase table <sup>1</sup>		80 °C	105 °C	105 °C	125 °C	125 °C	125 °C	125 °C				
Feature code		B302	B256	B301	B258	B252	B246	B300				
Alternator data sheet number		342	342	342	342	341	340	340				
Voltage ranges		347/600	120/208 thru 139/240 240/416 thru 277/480	347/600	110/190 thru 139/240 220/380 thru 277/480	120/208 thru 139/240 240/416 thru 277/480	277/480	347/600				
Surge kW		321	316	321	317	318	318	318				
Motor starting kVA (at 90% sustained voltage)	Shunt											
	PMG	1372	1372	1372	1372	1210	1028	1028				

Full load current amps at standby rating	<u>120/208</u>	<u>127/220</u>	<u>139/240</u>	<u>220/380</u>	<u>240/416</u>	<u>254/440</u>	<u>277/480</u>	<u>347/600</u>
	1042	985	903	570	521	492	452	361

<sup>1</sup>: Single phase power can be taken from a three phase generator set at up to 40% of the generator set nameplate kW rating at unity power factor.

## 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

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

Cummins Power Generation  
 1400 73<sup>rd</sup> Avenue N.E.  
 Minneapolis, MN 55432 USA  
 Phone: 763 574 5000  
 Fax: 763 574 5298

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.

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