

Generator set data sheet

Model: C100 D2R
Fuel type: Diesel
Document No.: EMERD-5833-EN-RevA

Fuel consumption 50 Hz	Standby				Prime			
	kVA (kW)				kVA (kW)			
Ratings	110 (88)				100 (80)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
L/hr	9	15	21	27	8	14	20	25

Fuel consumption 60 Hz	Standby				Prime			
	kW (kVA)				kW (kVA)			
Ratings	100 (125)				90 (110)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
L/hr	10	18	25	31	9	16	23	28

Engine	Standby rating	Prime rating
Gross engine power output 50 Hz/60 Hz, kWm	113 / 131	97 / 113
BMEP at set rated load 50 Hz/60 Hz, kPa	2022 / 1964	1740 / 1696
Engine manufacturer	Cummins	
Engine model	QSB5G5	
Configuration	4 cycle; in-line; 4 cylinder	
Aspiration	Turbo-charged and charge air cooled	
Bore, mm	107	
Stroke, mm	124	
Rated speed 50 Hz/60 Hz, rpm	1500 / 1800	
Piston speed 50 Hz/60 Hz, m/s	6.2 / 7.4	
Compression ratio	17.3:1	
Lube oil capacity, L	12.2	
Overspeed limit 50 Hz/60 Hz, rpm	2070	
Regenerative power 50 Hz/60 Hz, kW	14 / 19	
Governor type	FAE (Elec.)	

Fuel flow

Maximum fuel flow, L/hr	133
Maximum fuel inlet restriction (clean/dirty filter), mm Hg	126 / 254
Maximum fuel inlet temperature, °C	71

Air

Combustion air 50 Hz/60 Hz, m ³ /min	8.64 / 10.26	8.22 / 10
Maximum air cleaner restriction (clean/dirty filter), kPa	3.7 / 6.2	

Exhaust

Exhaust gas flow at set rated load 50 Hz/60 Hz, m ³ /min	20.64 / 24.9	18.72 / 22.38
Exhaust gas temperature 50 Hz/60 Hz, °C	477 / 490	446 / 431
Maximum exhaust back pressure, kPa	10	

Standard set-mounted radiator cooling

	Standby rating	Prime rating
Ambient design, °C	50	
Fan load, kWm 1500 rpm/1800 rpm	4	
Coolant capacity (with radiator), L	25	
Cooling system air flow, m ³ /sec 1500 rpm/1800 rpm	2.03 / 2.52	
Total heat rejection, Btu/min 1500 rpm/1800 rpm	9977 / 11833	8781 / 10201
Max cooling air restriction, kPa	0.249	

Weights*

Unit dry weight kgs	2034
Unit wet weight kgs	2379

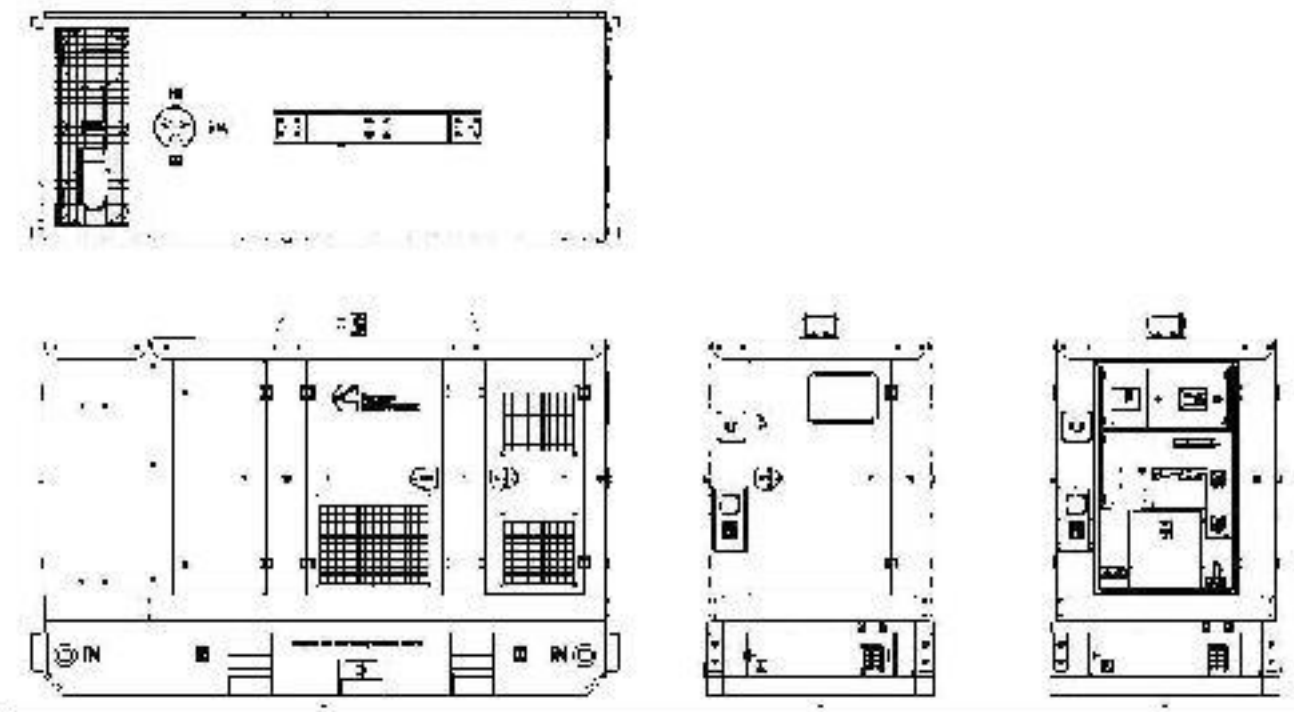
* Weights represent a set with standard features. See outline drawing for weights of other configurations.

Dimensions

	Length	Width	Height
Enclosed set standard dimensions, m	2.9	1.1	1.9

Genset outline

Enclosed set



Outlines are for illustrative purposes only. Please refer to the genset outline drawing for an exact representation of this model.

Alternator data

Alternator	Connection	Temp rise °C	Duty	Voltage 50 Hz, L-L	Voltage 60 Hz, L-L
UC274C	Series Star, 3Ph	163/27 / 125/40	Standby/Prime	380, 400, 415	416, 440, 460, 480

Noise data 50Hz

Enclosed set sound power level, LwA	95 dB
Enclosed set sound pressure level, dB(A) @ 75% prime, 7m	66.7 dB(A)

Control options

- Cummins PowerCommand® 1.1 control system
- DSEGenSet® DSE7310 auto start control module
- ComAp IntelliLite® MRS 16 manual and remote controller

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.

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

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