

Generator set data sheet



Model: C90D5I
Frequency: 50
Fuel type: Diesel

Spec sheet:	S-6612
Noise datasheet (enclosed):	MSP-4144

Fuel consumption	Standby				Prime			
	kVA (kW)				kVA (kW)			
Ratings	90 (72)				82 (65.6)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
gph	1.6	3.03	4.5	6.2	1.5	2.7	4.1	5.6
L/hr	6.2	11.5	17.1	23.6	5.7	10.3	15.4	21.2

Engine	Standby rating	Prime rating
Engine manufacturer	Cummins Inc.	
Engine model	6BTA5.9 G5	
Configuration	Inline 6-Cylinder diesel	
Aspiration	Turbocharged and after-cooled	
Gross engine power output, kWm	102	93
BMEP at set rated load, kPa	1386	1265
Bore, mm	102	
Stroke, mm	120	
Rated speed, rpm	1500	
Piston speed, m/s	6	
Compression ratio	17.6:1	
Lube oil capacity, L	16.4	
Overspeed limit, rpm	1800	
Regenerative power, kW	6.545454545	
Governor type	Electronic	
Starting voltage	12 Volts DC	

Fuel flow	
Maximum fuel flow, L/hr	45
Maximum fuel inlet restriction, mm Hg	8
Maximum fuel inlet temperature, (°C)	71

Air	Standby rating	Prime rating
Combustion air, m ³ /min	7.86	7.2
Maximum air cleaner restriction, kPa	6	

Exhaust

Exhaust gas flow at set rated load, m ³ /min	21.4	19.5
Exhaust gas temperature, °C	540	533
Maximum exhaust back pressure, kPa	10.5	

Standard set-mounted radiator cooling

Ambient design, °C @ 12.7mm H ₂ O	54	
Fan load, kW _m	5.60992	
Coolant capacity (with radiator), L	19.75	
Cooling system air flow, m ³ /sec @ 12.7mm H ₂ O	3.44	
Total heat rejection, BTU/min	9259	8419
Maximum cooling air flow static restriction, mm H ₂ O	12.7	

Weights*

	Open	Enclosed
Unit dry weight, kgs	1043	1424
Unit wet weight, kgs	1059	1440
Unit wet weight with fuel, kgs	1351	1732

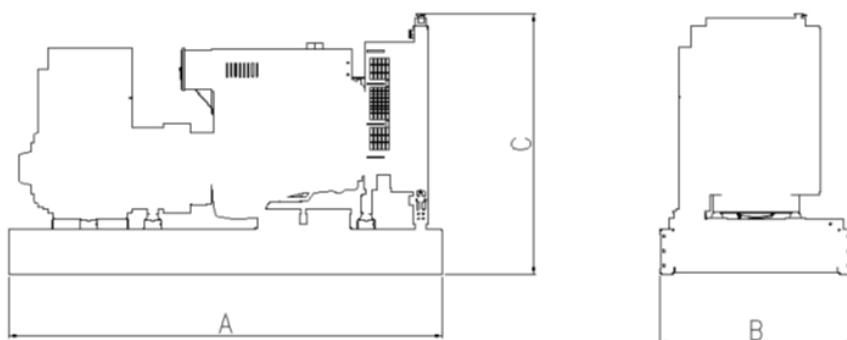
* Weights represent a set with standard features. See outline drawing for weights of other configurations.

Dimensions

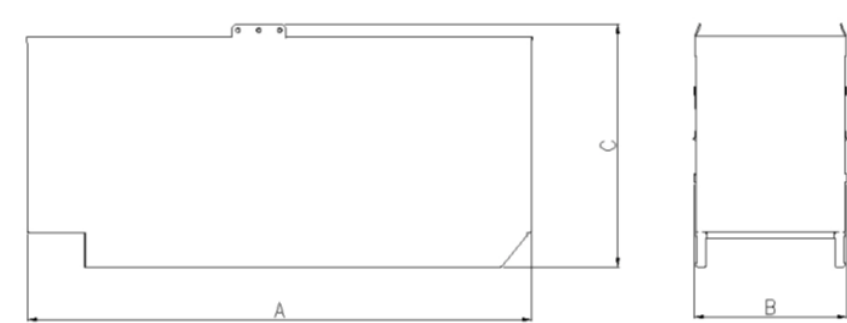
	Length	Width	Height
Standard open set dimensions	2268	1276	1462.7
Enclosed set standard dimensions	3157	1276	1753

Genset outline

Open set



Enclosed set



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

Alternator data

Connection ¹	Temp rise °C	Duty ²	Alternator	Voltage
Wye, 3 phase	163/125	S/P	S2L1D-G4	380 - 440V

Ratings definitions

Emergency Standby Power (ESP):	Limited-Time running Power (LTP):	Prime Power (PRP):	Base load (Continuous) Power (COP):
Applicable for supplying power continuously to varying electrical loads for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528 and 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.	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.

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

$$\frac{\text{kW} \times \text{Single Phase Factor} \times 1000}{\text{Voltage}}$$

For more information contact your local Cummins distributor or visit power.cummins.com

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