

Generator set data sheet



Model: C38D5I
Frequency: 50 Hz
Fuel type: Diesel

Spec sheet:	S-6693
Noise data sheet (enclosed):	MSP-4168
Cooling data sheet:	MCP-2237

Fuel consumption	Standby				Prime			
	kVA (kW)				kVA (kW)			
Ratings	38 (30.4)				35 (28)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
gph	0.8	1.3	1.8	2.9	0.8	1.2	1.7	2.4
L/hr	3.2	4.8	7.0	10.8	3.1	4.5	6.4	9.0

Engine	Standby rating	Prime rating
Engine manufacturer	Cummins Inc.	
Engine model	X 3.3-G1	
Configuration	4 cycle; In-line; 4 cylinder diesel	
Aspiration	Naturally aspirated	
Gross engine power output, kWm	36	32
BMEP at set rated load, kPa	863.9	767.9
Bore, mm	91.4	
Stroke, mm	127	
Rated speed, rpm	1500	
Piston speed, m/s	6.35	
Compression ratio	18.5:1	
Lube oil capacity, L	6.8	
Overspeed limit, rpm	1725	
Governor type	Mechanical	
Starting voltage	12 Volts DC	

Fuel flow

Maximum fuel flow, L/hr	40
Maximum fuel inlet restriction, mm Hg	73.66
Maximum fuel inlet temperature, °C	60

Air	Standby rating	Prime rating
Combustion air, m ³ /min	2.06	1.95
Maximum air cleaner restriction, kPa	2.5	

Exhaust

Exhaust gas flow at set rated load, m ³ /min	2.29	2.19
Exhaust gas temperature, °C	610	580
Maximum exhaust back pressure, kPa	4.74	

Standard set-mounted radiator cooling

Ambient design @ 12.7 mm H ₂ O and Prime duty, °C	51.3	
Fan load, kW _m	1.2	
Coolant capacity (with radiator), L	26	
Cooling system air flow, m ³ /sec @ 12.7 mm H ₂ O	0.98	
Total heat rejection, Btu/min	3797	3541

Weights*

	Open	Enclosed
Unit dry weight, kgs	745	980
Unit wet weight, kgs	765	1000

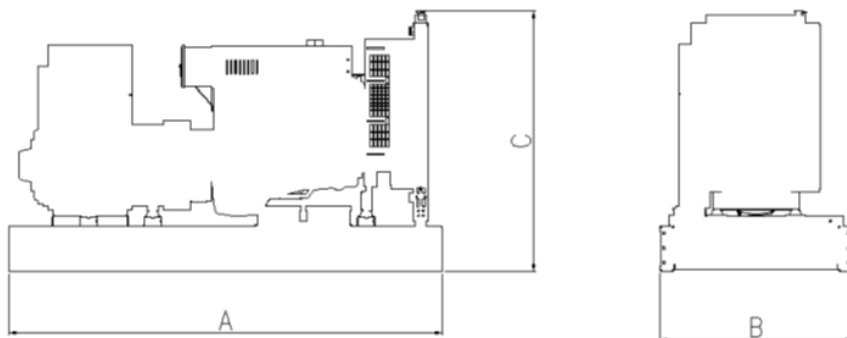
* Weights represent a set with standard features. See outline drawing for weights of other configurations.

Dimensions

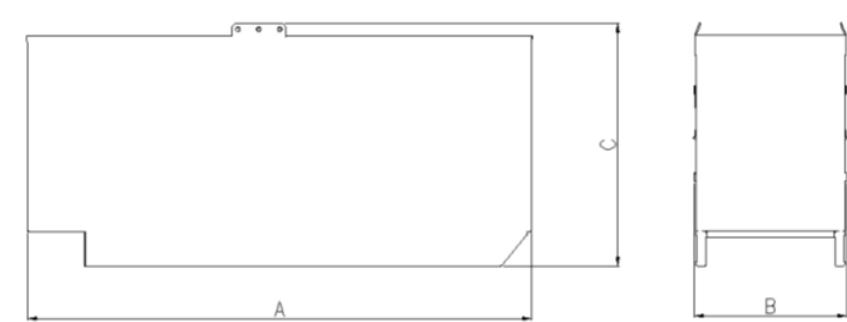
	Length (A)	Width (B)	Height (C)
Standard open set dimensions, mm	1805	930	1078
Enclosed set standard dimensions, mm	1954	970	1211

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	Temp rise °C	Duty	Alternator	Voltage
Wye, 3-phase	163/125	S/P	S1L2-J1	200V, 208V, 400V and 416V
Wye, 3-phase	163/125	S/P	S1L2-K1	190V and 380V
Wye, 3-phase	125/105	S/P	S1L2-K1	200V, 208V, 400V and 416V
Wye, 3-phase	125/105	S/P	S1L2-N1	190V and 380V
Wye, 1-phase	163/125	S/P	S1L2-R1	230V

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

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

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

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