

Generator set data sheet



Model: C38 D5 (X-Series)
Frequency: 50 Hz
Fuel type: Diesel

Spec sheet:	SS23-CPGK
Noise data sheet (open/enclosed):	ND50-OS550/ND50-CS550
Airflow data sheet:	AF50-550
Derate data sheet (open/enclosed):	DD50-OS550/DD50-CS550
Transient data sheet:	TD50-550

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	
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	
Regenerative power, kW	2	
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	2.06
Maximum air cleaner restriction, kPa	2.5	

Exhaust		
Exhaust gas flow at set rated load, m ³ /min	2.29	2.29
Exhaust gas temperature, °C	600	550
Maximum exhaust back pressure, kPa	4.75	

Standard set-mounted radiator cooling		
Ambient design, °C	50	
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	1.6	
Total heat rejection, Btu/min	1651	1537
Maximum cooling air flow static restriction, mm H ₂ O	TBC	

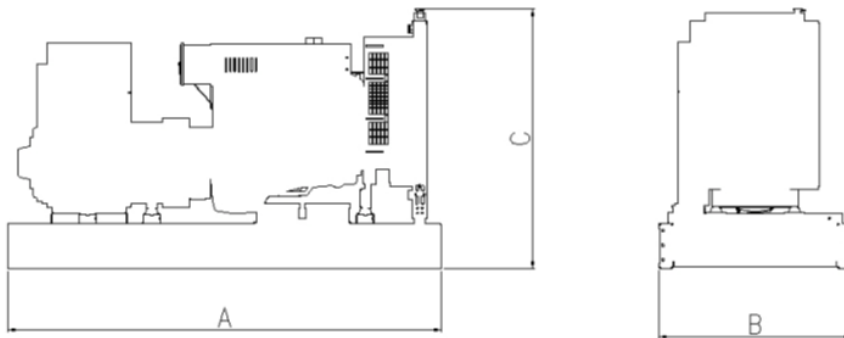
Weights*	Open	Enclosed
Unit dry weight, kgs	743	1127
Unit wet weight, kgs	778	1162

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

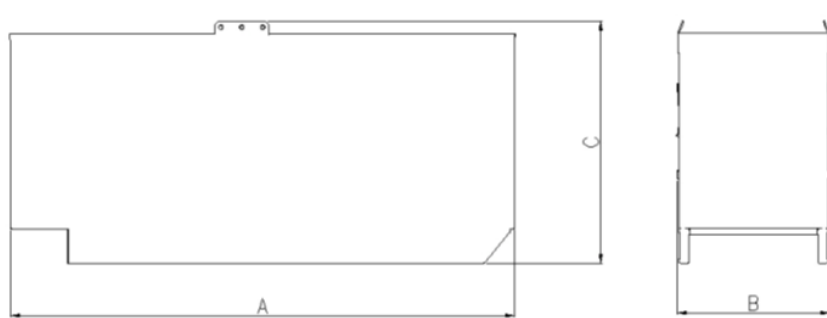
Dimensions	Length	Width	Height
Standard open set dimensions, mm	1753	930	1238
Enclosed set standard dimensions, mm	2253	969	1619

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	400V, 416V
Wye, 3-phase	163/125	S/P	S1L2-K1	380V
Wye, 3-phase	125/105	S/P	S1L2-K1	400V, 416V
Wye, 3-phase	125/105	S/P	S1L2-N1	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 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 and DIN 6271.	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 and DIN 6271.	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 and DIN 6271.

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

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

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