Cummins **Power Generation**

» Generator set data sheet

Model: **C22 D5 (X-Series)**
Frequency: **50**
Fuel Type: **Diesel**

Spec sheet:	SS26-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				Data Center Continuous			
	kVA (kW)				kVA (kW)			
Ratings	22 (17.6)				19.8 (15.84)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
gph	0.3	0.6	0.8	1.1	0.3	0.5	0.8	1.0
L/hr	1.28	2.56	3.84	5.12	1.18	2.36	3.53	4.71

Engine

	Standby rating	Data Center Continuous
Engine manufacturer	Cummins	
Engine model	X2.5G2	
Configuration	4 Cycle; In-line; 3 Cylinder Diesel	
Aspiration	Naturally Aspirated	
Gross engine power output, kWm	27	24.37
BMEP at set rated load, kPa	851	768.1
Bore, mm	91.7	
Stroke, mm	127	
Rated speed, rpm	1500	
Piston speed, m/s	7.62	
Compression ratio	18.5:1	
Lube oil capacity, L	6.5	
Overspeed limit, rpm	1650	
Regenerative power, kW	2	
Governor type	Mechanical - Std	
Starting voltage	12 Volts DC	

Fuel flow

Maximum fuel flow, L/hr	40
Maximum fuel inlet restriction, mm Hg	28.0249
Maximum fuel inlet temperature (°C)	60

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روبـروی پالایشگاه نفت پارس ، پلاک ۱۲

Air

Air	Standby rating	Data Center Continuous
Combustion air, m³/min	2.30	2.30
Maximum air cleaner restriction, kPa	4	

Exhaust

Exhaust		
Exhaust gas flow at set rated load, m³/min	N/A	N/A
Exhaust gas temperature, °C	660	660
Maximum exhaust back pressure, kPa	3.38	

Standard set-mounted radiator cooling

| Standard set-mounted radiator cooling		
Ambient design, °C	50	
Fan load, KW$_m$	0.6	
Coolant capacity (with radiator), L	7	
Cooling system air flow, m3/sec @ 12.7mmH2O	0.78	
Total heat rejection, BTU/min	2561	N/A
Maximum cooling air flow static restriction mmH2O	N/A	

Weights*

Weights*	Open	Enclosed
Unit dry weight kgs	418.5	743.5
Unit wet weight kgs	582	907

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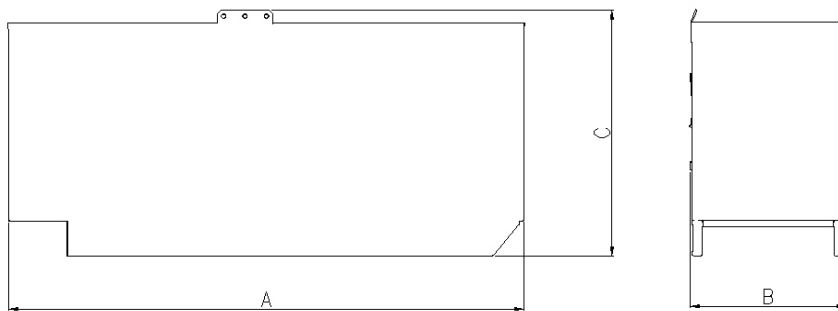
Dimensions

Dimensions	Length	Width	Height
Standard open set dimensions	1667	930	1247
Enclosed set standard dimensions	2082	930	1448

Genset outline

Open set
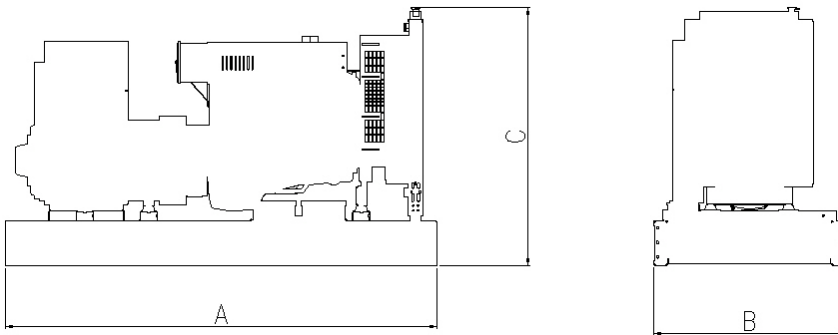
Enclosed set

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

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Alternator data

Connection[1]	Temp rise °C	Duty[2]	Alternator	Voltage
3 Phase	163/150C	S/P	PI144D	380-415V
3 Phase	125/105C	S/P	PI144E	380-440V

Ratings definitions

Emergency Standby Power (ESP)	Limited-Time running Power (LTP):	Prime Power (PRP)	Data Center 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 back-up power for data center applications evaluated at specific site conditions. This rating is based on load profiles and performance requirements consistent with the data center industry. This rating is site specific and changes in application type or location would require further consideration.

Formulas for calculating full load currents:

Three phase output

$$\frac{kW \times 1000}{Voltage \times 1.73 \times 0.8}$$

Single phase output

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

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