

Model: C650 D5A  
 Frequency: 50  
 Fuel Type: Diesel

» Generator set data sheet

650 kVA Standby



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Fuel consumption	Standby				Prime			
	kW (kVA)				kW (kVA)			
Ratings	520 (650)				472 (590)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	10.3	18.8	27.5	36.7	N.A.	N.A.	N.A.	N.A.
L/hr	39	71	104	139	N.A.	N.A.	N.A.	N.A.

Engine	Standby rating	Prime rating
Engine manufacturer	Cummins	
Engine model	KTA19G8	
Configuration	4-Cycle; In-line; 6-Cylinder Diesel	
Aspiration	Turbocharged and Charge Air Cooled	
Gross engine power output, kWm	575	N.A.
BMEP at set rated load, kPa	2427	N.A.
Bore, mm	159	
Stroke, mm	159	
Rated speed, rpm	1500	
Piston speed, m/s	7.9	
Compression ratio	13.9:1	
Lube oil capacity, L	38	
Overspeed limit, rpm	1800±50	
Regenerative power, kWm	45	
Governor type	Electronic	
Starting voltage	24 Volts DC	

Fuel flow	
Maximum fuel flow, L/hr	220
Maximum fuel inlet restriction, mm Hg	203
Maximum fuel inlet temperature (°C)	60

Air	
Combustion air, m <sup>3</sup> /min	38.1
Maximum air cleaner restriction, mm H <sub>2</sub> O	635

Exhaust	Standby rating	Prime rating
Exhaust gas flow at set rated load, m <sup>3</sup> /min	106.4	N.A.
Exhaust gas temperature, °C	579	N.A.
Maximum exhaust back pressure, mmHg	76	

Standard set-mounted radiator		
Ambient design, °C	40	
Fan load, KW <sub>m</sub>	19	
Coolant capacity (with radiator), L	132	
Cooling system air flow, m <sup>3</sup> /min @ 12.7mmH <sub>2</sub> O	666	
Total heat rejection, BTU/min	17975	N.A.
Maximum cooling air flow static restriction mmH <sub>2</sub> O	12.7	

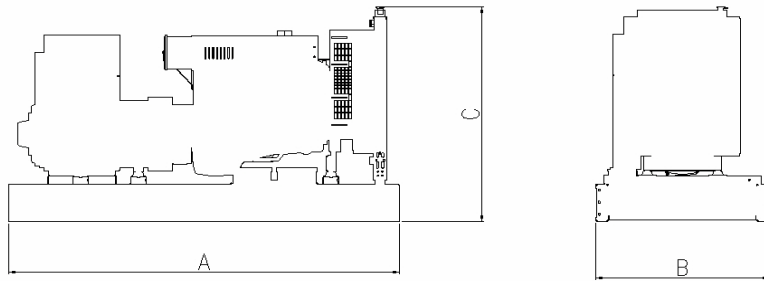
Weights*	Open	Enclosed
Unit dry weight kgs	4225	N.A.
Unit wet weight kgs	4350	N.A.

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

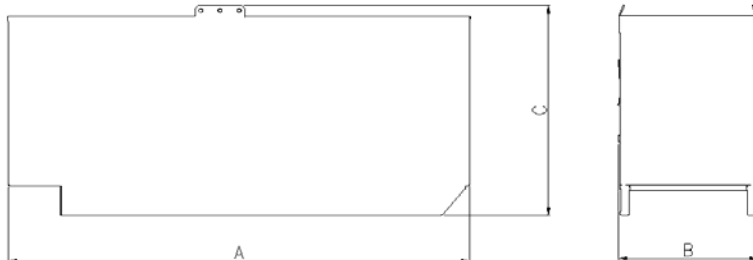
Dimensions	Length "A"	Width "B"	Height "C"
Standard open set dimensions, mm	3419	1285	1906
Enclosed set standard dimensions, mm	4800	1800	2400

## 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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APSB-1154-07 (9/07)



## Alternator data

Feature code	Connection <sup>1</sup>	Temp rise degrees C	Duty <sup>2</sup>	Alternator	Voltage
-	Wye, 3 Phase	163/125	S/P	HC5E	380-415V

## Ratings definitions

Standby:	Limited Time Running:	Prime (unlimited running time):	Base Load (Continuous):
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 is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power 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 in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Notes:

- Limited single phase capability is available from some three phase rated configurations. To obtain single phase rating, multiply the three phase kW rating by the single phase factor. All single phase ratings are at unity power factor.
- Standby (S) and Prime (P) ratings.

## Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.732 \times 0.8}$$

Single phase output

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

See your distributor for more information.

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