Generator set data sheet

PROUDLY 100% AUSTRALIAN OWNED
MACFARLANE GENERATORS
ESTABLISHED 1949

Model: C150 D5
Frequency: 50 Hz
Fuel type: Diesel

Spec sheet:	**SS28-CPGK**
Noise data sheet (open/enclosed):	**ND50-CS550**
Airflow data sheet:	**AF50-550**
Derate data sheet (open/enclosed):	**TBD**
Transient data sheet:	**TD50-550**

Fuel consumption

	Standby				Prime			
	kVA (kW)				kVA (kW)			
Ratings	150 (120)				136 (109)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
gph	3.30	4.6	7.7	9.5	3.2	4.2	6.6	8.2
L/hr	12.50	17.50	29.00	36.00	12.00	16.00	25.00	31.20

Engine

	Standby rating	Prime rating
Engine manufacturer	TCL	
Engine model	6BTAA5.9-G6	
Configuration	4-cycle, in-line, 6-cylinder	
Aspiration	Turbocharged and charged air-cooled	
Gross engine power output, kWm	145	135
BMEP at set rated load, kPa	2008	1831
Bore, mm	102	
Stroke, mm	120	
Rated speed, rpm	1500	
Piston speed, m/s	6	
Compression ratio	16.5 :1	
Lube oil capacity, L	16.4	
Overspeed limit, rpm	1800	
Regenerative power, kW	NA	
Governor type	Electronic	
Starting voltage	12 V	

Fuel flow

Maximum fuel flow, L/hr	45
Maximum fuel inlet restriction, mm Hg	101/203 (clean/dirty filter)
Maximum fuel inlet temperature, °C	71

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Air	Standby rating	Prime rating
Combustion air, m^3/min	8.95	8.35
Maximum air cleaner restriction, kPa	3.74	

Exhaust

Exhaust gas flow at set rated load, m^3/min	31	29
Exhaust gas temperature, °C	520	519
Maximum exhaust back pressure, kPa	10.15	

Standard set-mounted radiator cooling

Ambient design, °C	50	
Fan load, kWm	9.8	
Coolant capacity (with radiator), L	22.1	
Cooling system air flow, m^3/sec @ 12.7 mm H_2O	3.77	
Total heat rejection, Btu/min	4071	3867
Maximum cooling air flow static restriction mm H_2O	12.7	

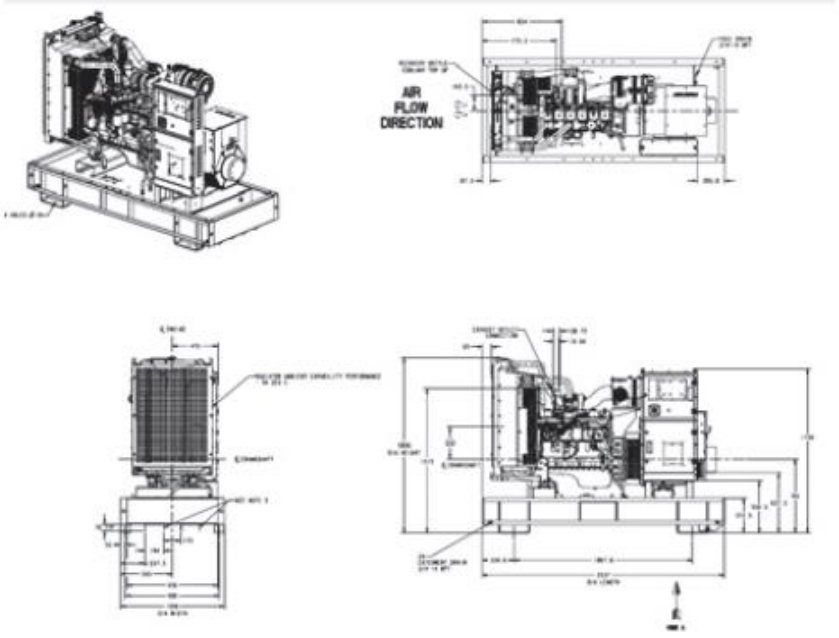
Weights*	Open	Enclosed
Unit dry weight kgs	1635	2390
Unit wet weight kgs	1650	2400

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

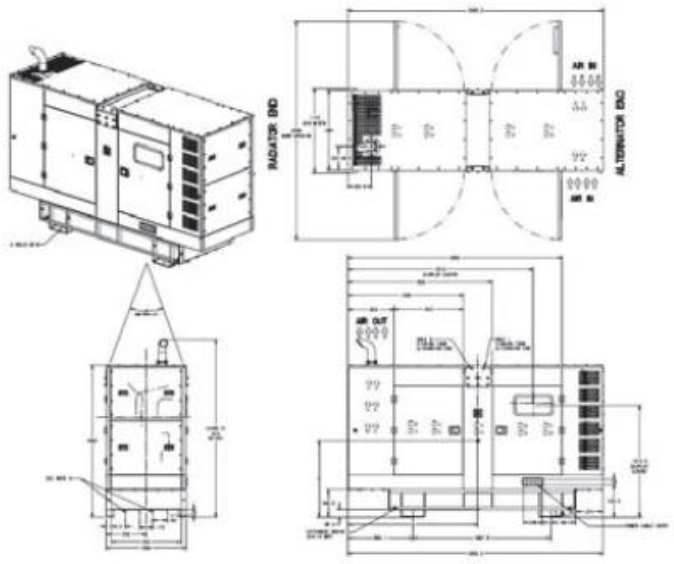
Dimensions	Length	Width	Height
Standard open set dimensions mm	2537	1090	1846
Enclosed set standard dimensions mm	3460	1090	2387

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 ºC	Duty[2]	Alternator	Voltage
Wye	163	ESP	UCI274E	190 - 208 & 380 - 416 V
Wye	150	ESP	UCI274F	190 - 208 & 380 - 416 V
Wye	125	PRP	UCI274E	190 - 208 & 380 - 416 V
Wye	105	PRP	UCI274F	190 - 208 & 380 - 416 V

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, 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 power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

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

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

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