

Generator set data sheet



Model: C640D5
Frequency: 50 Hz
Fuel type: Diesel

Fuel consumption	Standby				Prime			
	kVA (kW)				kVA (kW)			
Ratings	640 (512)				582 (466)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
g/kWh	218	202	213	214	229	171	208	216
L/hr	40	69	107	143	39	54	95	131

Engine	Standby rating	Prime rating
Engine manufacturer	Cummins	
Engine model	KTAA19-G6	
Configuration	Cast iron, in-line, 6 cylinder	
Aspiration	Turbocharged and charged after-cooled (air to air)	
Gross engine power output, kWm	570	520
BMEP at set rated load, kPa	2403	2192
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	50	
Overspeed limit, rpm	1725	
Regenerative power, kW	40	
Governor type	Electronic	
Starting voltage	24	

Fuel flow	
Maximum fuel flow, L/hr	250.2
Maximum fuel inlet restriction, mm Hg	203.2
Maximum fuel inlet temperature, °C	60

Air	Standby rating	Primary rating
Combustion air, m³/min	42.18	37.38
Maximum air cleaner restriction, kPa	6.23	

Exhaust

Exhaust gas flow at set rated load, m ³ /min	119.1	111.6
Exhaust gas temperature, °C	457	433
Maximum exhaust back pressure, kPa	10	

Standard set-mounted radiator cooling

Ambient design, °C	45	
Fan load, kWm	18	
Coolant capacity (with radiator), L	110.5	
Cooling system air flow, m ³ /sec @ 12.7 mm H ₂ O	10.8	
Total heat radiated to ambient, MJ/min (Btu/min)	6.7(6284)	6.0(5732)
Total heat rejection, MJ/min (Btu/min)	31.1(29461)	28.3(26876)
Maximum cooling air flow static restriction mm H ₂ O	12.7	

Weights*

	Open	Enclosed
Unit dry weight kgs	4645	N/A
Unit wet weight kgs	4784	N/A

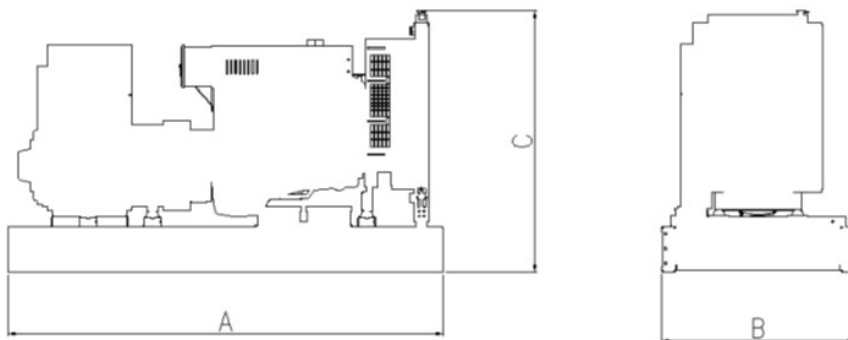
* Weights represent a set with standard features. See outline drawing for weights of other configurations.

Dimensions

	Length (A)	Width (B)	Height (C)
Standard open set dimensions, mm	3680	1450	2050
Enclosed set standard dimensions, mm	N/A	N/A	N/A

Genset outline

Open 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 °C	Duty ²	Alternator	Voltage
Wye, 3 Phase	150 °C	S/P	HCI534E/544E	400 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

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