Generator set data sheet

Model: C22D5T (X2.5 series)
Frequency: 50 Hz
Fuel type: Diesel

Spec sheet:	**EMERS-5627-EN**
Sound data sheet (enclosed, Sound Level 1):	**MSP-3049 74 dBA @ 1 m at 100% load**
Sound data sheet (enclosed, Sound Level 2):	**MSP-1143 70 dBA @ 1 m at 100% load**

Fuel consumption

	Prime (3 Phase)			
	kVA (kW)			
Ratings	20.0 (16.0)			
Load	**1/4**	**1/2**	**3/4**	**Full**
gph	0.66	0.85	1.08	1.37
L/hr	2.5	3.2	4.1	5.2

Engine

	Prime rating
Engine manufacturer	Cummins
Engine model	X2.5-G2
Configuration	4 cycle, in-line, 3 cylinder diesel
Aspiration	Naturally aspirated
Gross engine power output	24.3 kWm
BMEP at set rated load	780 kPa
Bore	91.4 mm
Stroke	127 mm
Rated speed	1500 rpm
Piston speed	6.35 m/s
Compression ratio	18.5:1
Lube oil capacity	6.5 L
Overspeed limit	1725 rpm
Regenerative power	2 kW
Governor type	Mechanical Standard
Starting voltage	12 Volts DC

Fuel

Maximum fuel flow	40 L/hr
Maximum fuel inlet restriction	73.66 mm Hg
Maximum fuel inlet temperature	60 °C

Air

	Prime Rating
Combustion air	2.30 m^3/min
Maximum air cleaner restriction	6.23 kPa

Exhaust

Exhaust gas flow at set rated load, m^3/min	158 m^3/min
Exhaust gas temperature	660 °C
Maximum exhaust back pressure	3.38 kPa

Standard set-mounted radiator cooling

Ambient design	50 °C
Fan load	0.95 kW_m
Coolant capacity (with radiator)	15.0 L
Cooling system air flow	0.93 m^3/sec @ 12.7 mmH_2O
Total heat rejection	1309 Btu/min
Maximum cooling air flow static restriction	19 mmH_2O

Cold Start Capability

Minimum ambient temperature for cold start with –watt coolant heater to rated speed	14 °F (-10 °C)
Minimum ambient temperature for unaided cold start to idle speed	32 °F (0 °C)

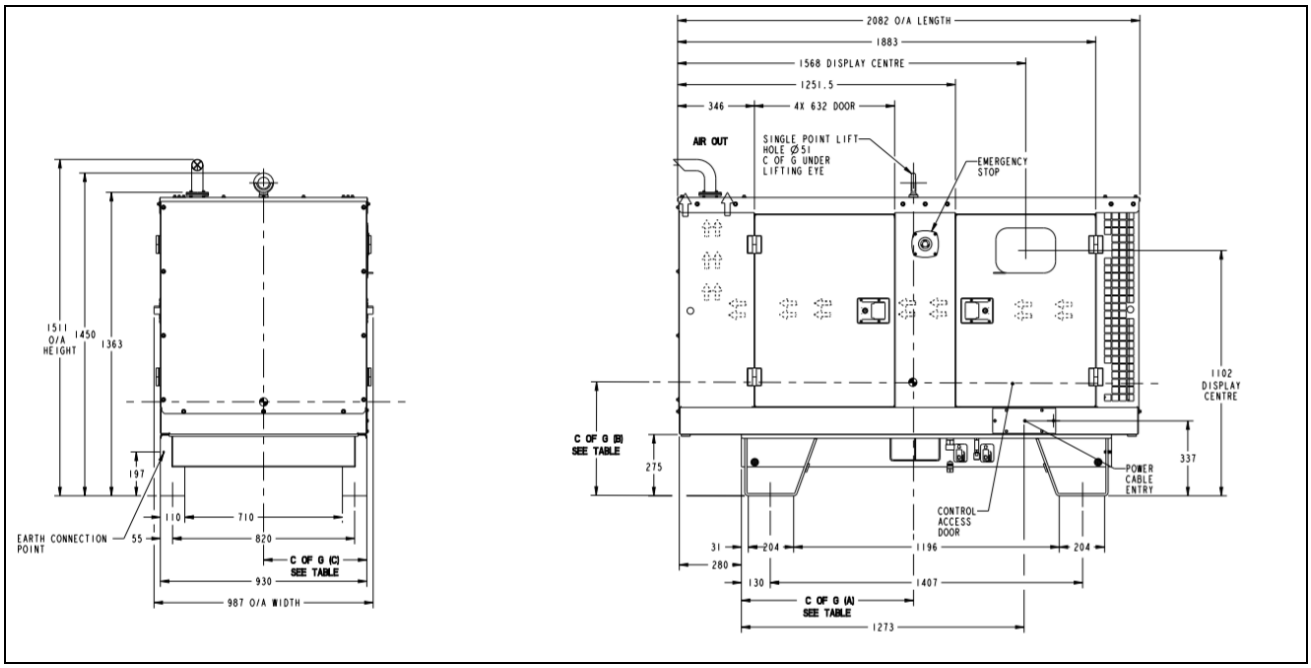
Weights*	**Enclosed**
Unit dry weight (kg)	
Genset with 150 Ltr Configuration	1168
Genset with 1000 Ltr configuration	1501
Unit wet weight (kg)	
Genset with 150 Ltr Configuration	1185
Genset with 1000 Ltr configuration	1517

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

Dimensions	**Length “L” (mm)**	**Width “W” (mm)**	**Height “H” (mm)**
Standard enclosed set dimensions			
Genset with 150 Ltr Configuration	2082	987	1511
Genset with 1000 Ltr configuration	2180	978	2005

Generator set outline

Genset with 150 Ltr tank configuration:



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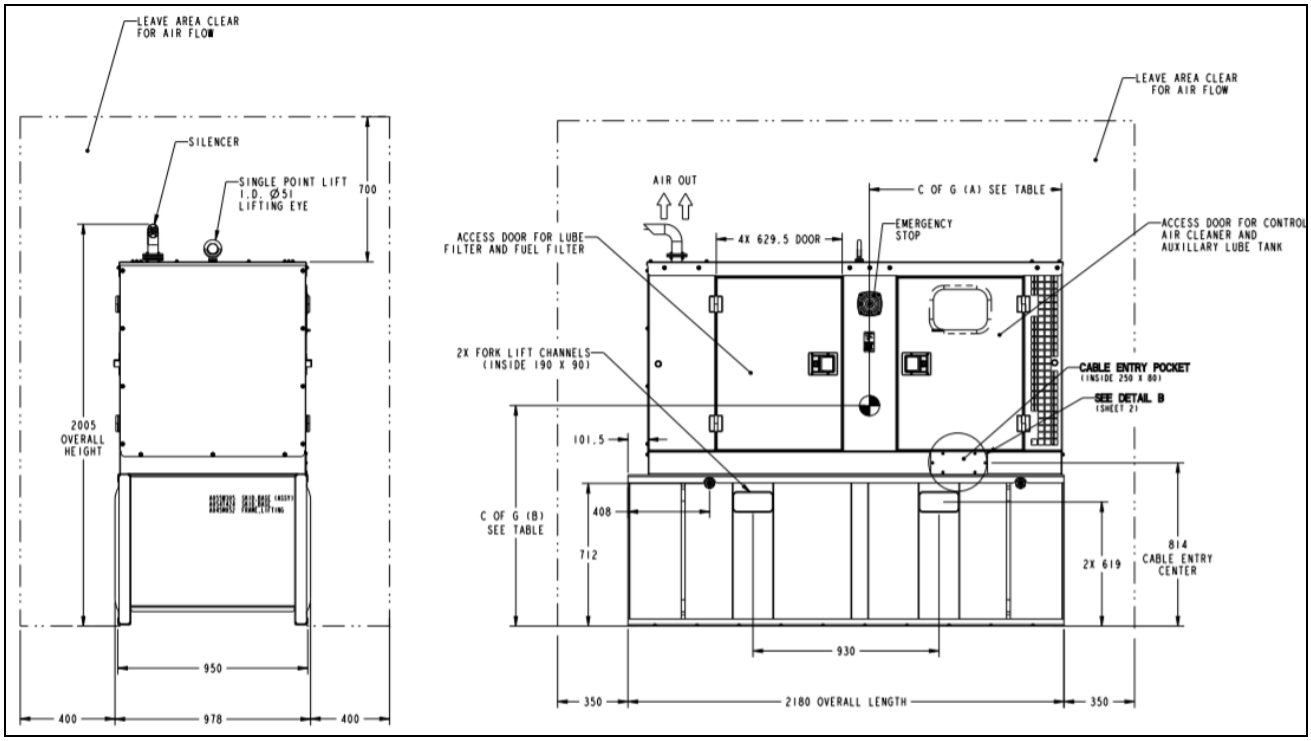
Genset with 1000 Ltr tank configuration:



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

Alternator data

Connection	Temp rise ºC	Duty	Alternator	Voltage
3 phase	125C	Standby/Prime	S0L2-M1	380V
3 phase	125C	Standby/Prime	S0L2-G1	400-416V
1 phase	105C	Standby/Prime	S0L2-U1	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, 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

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

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