Cat® C13 DIESEL GENERATOR SETS

Prime: 50 Hz; 400 kVA

Picture shown may not reflect actual configuration.

Engine Model	Cat® C13 In-line 6, 4-cycle diesel
Bore x Stroke	130 mm x 157 mm (5.1 in x 6.2 in)
Displacement	12.5 L (763 in^3)
Compression Ratio	16.6:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4
Emission Certifications	India CPCB/ MoEF Standards

FEATURES AND BENEFITS

CAT® DIESEL ENGINES

The four-cycle Cat diesel engine combines consistent performance with excellent fuel economy and transient response that meets ISO 8528-5. The engines feature a reliable, rugged, and durable design that has been field proven in thousands of applications worldwide in emergency standby installations.

CAT NOISE ENCLOSURE

The Genset is approved as per CPCB India Regulations. The Noise Enclosures are designed for easy access of all engine parts, and lube oil fumes disposal. The enclosures are made of Non-igniting, self-extinguishing mineral wool 100 mm thick with resin bonded, used for noise and thermal insulation.

COOLING SYSTEM

The cooling system has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

GENERATORS

The generators used on Cat packages have been designed and tested to work with the Cat engine. The generators are built with robust Class H insulation and provide industry-leading motor starting capability and altitude capabilities.

TCP1000 CONTROL PANELS

The TCP 1000 is a compact Auto Mains (Utility) Failure Control Module that has been developed to provide an outstanding range of features. Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules will give comprehensive engine and alternator protection.

GENERATOR SET SPECIFICATIONS

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3 Pitch
No. of Leads	12
Available Voltage Option	415V
Frequency	50 Hz
Alternator Voltage	24V
Alternator Insulation and IP	Class H; IP23
Standard Temperature Rise	125/130 °C
Available Excitation Options	AREP
Voltage Regulator	D350

STANDARD & OPTIONAL EQUIPMENT

Air Inlet System	Dual element cannister type air cleaner Service indicator
Control Panels	TCP 1000 controller Emergency stop push button Product link generation – 444 Product link generation – 601 and 641 (Optional)
Cooling System	Radiator fan and belt drive Fan and belt guard Coolant drain line with valve Coolant level sensor Cat extended life coolant
Exhaust System	Dry exhaust manifold Flanged faced outlets Exhaust mufflers Stainless steel exhaust flex fittings Flanges
Fuel System	Primary and secondary fuel filters Fuel priming pump Flexible fuel lines Engine fuel transfer pump Integrated fuel cooler Enclosure integrated fuel tank
Generators and Generator Attachments	AREP Class H insulation Class H temperature rise Random wound D350 voltage regulator Load acceptance module (LAM) Paralleling kit droop transformer Power terminal strip connections IP 23 protection
Governing System	Cat Electronic Governor (ADEMTM A4)
Lube System	Lubricating oil and filter Oil drain line with valves Fumes disposal Gear type lube oil pump Lube oil level indicator (dipstick)
Mounting	Anti-vibration mounts
Starting/Charging System	24 volt starting motor Batteries with rack and cables 45 amp charging alternator 2 nos 12V 200 AH battery (Optional) Disconnect switch (Optional)
General	SAE standard rotation Flywheel – SAE No.14 Flywheel housing – SAE No.1 Paint – Caterpillar Yellow except rails and radiators gloss black

Prime: 50 Hz; 415V

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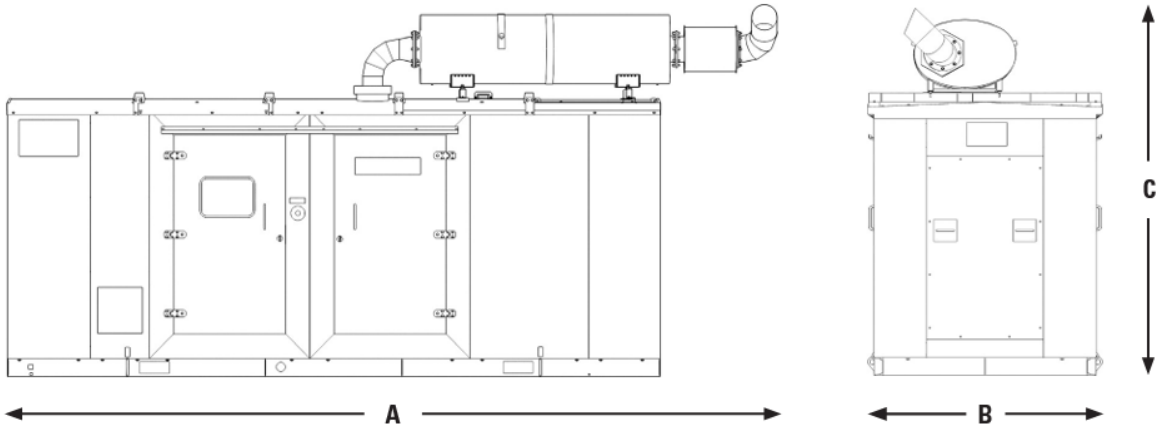
Model	Prime	Emission Strategy
C13	400 kVA 320 ekW	India CPCB/ MoEF Standards

PACKAGE PERFORMANCE

Performance	Prime
Frequency	50 Hz
Genset power rating with fan @ 0.8 power factor	400 kVA
Engine Power Rating	483 bhp
Fuelling strategy	India CPCB/ MoEF Standards
Performance number	EM0552
Fuel Consumption	
100% load with fan, L/hr (gal/hr)	84.0 (22.1)
75% load with fan, L/hr (gal/hr)	67.2 (17.7)
50% load with fan, L/hr (gal/hr)	48.7 (12.8)
25% load with fan, L/hr (gal/hr)	27.0 (7.1)
Cooling System[1]	
Radiator air flow restriction (system), kPa (in. Water)	0.12 (0.48)
Radiator air flow, m^3/min (cfm)	660 (23308)
Engine coolant capacity, L (gal)	14.2 (3.8)
Radiator coolant capacity, L (gal)	48 (12.6)
Total coolant capacity, L (gal)	62.2 (16.4)
Inlet Air	
Combustion air inlet flow rate, m^3/min (cfm)	25.5 (899.7)
Max. allowable combustion air inlet temp, °C (°F)	48 (118)
Exhaust System	
Exhaust stack gas temperature, °C (°F)	501.9 (935.4)
Exhaust gas flow rate, m^3/min (cfm)	69.7 (2460)
Exhaust system backpressure (maximum allowable), kPa (in. water)	10.0 (40.0)
Heat Rejection	
Heat rejection to jacket water, kW (Btu/min)	122 (6940)
Heat rejection to exhaust (total), kW (Btu/min)	300 (17044)
Heat rejection to atmosphere from engine, kW (Btu/min)	67 (3786)
Heat rejection to atmosphere from generator, kW (Btu/min)	23 (1308)
Lube System	
Sump refill with filter	40.0 (10.6)
Alternator[2]	
Voltage, V	415
Motor starting capability @ 30% voltage dip, skVA	960
Current, A	556
Frame Size	LC6124C
Excitation	AREP
Temperature Rise, °C	125

WEIGHTS & DIMENSIONS



Genset Model	Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Generator Set Weight kg (lb)
400 kVA, 320 ekW	5500 (216.5)	1800 (70.9)	2275 (89.6)	5700 (12566)

***Note:** For reference only – do not use for dealer for installation design. Please contact your local exact weights and dimensions.

DEFINITIONS AND CONDITIONS

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to the existing restriction from the factory.

[2] Alternator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32

APPLICABLE CODES AND STANDARDS

ISO 3046, ISO 8528, IEC60034-1, IS4722

Prime: Output available with varying load for an unlimited time. Prime power in accordance with ISO 8528. 10% overload power in accordance with ISO 3046.

Ratings: Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO 3046 standard conditions.

Fuel Rates: Fuel Consumption reported in accordance as per the ISO 3046-1 standard.

Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

LET'S DO THE WORK.™

www.cat.com/electricpower

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