



400 kVA 50 Hz, Prime

Image shown might not reflect actual configuration

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.

EMCP CONTROL PANELS

The EMCP controller features the reliability and durability you have to come to expect from your Cat equipment. The EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

ENGINE SPECIFICATIONS

Engine Model	Cat [®] C13 In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1in x 6.2in)
Displacement	12.5 L (763 in ³)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4
Emission Certifications	India CPCB/ MoEF Standards

GENERATOR SET SPECIFICATIONS

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3 Pitch
No. of Leads	12
Available Voltage Options	415V
Frequency	50Hz
Alternator Voltage	24V
Alternator Insulation & IP	Class H; IP23
Standard Temperature Rise	125/130 Deg C
Available Excitation Options	Self-Excited, AR
Voltage Regulator	R450M

STANDARD & OPTIONAL EQUIPMENT

Air inlet system	Dual element cannister type air cleaner Service indicator
Control panels	EMCP4.2 control panel. Speed adjust. Emergency stop push button Product Link Generation – 601 & 641
Cooling system	Radiator fan and belt drive Fan and belt guard Coolant drain line with valve Coolant level sensor Cat extended life coolant
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	Self excited Class H insulation Class H temperature rise Random Wound R450M 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 : 50Hz; 415V



Image shown may not reflect actual configuration

Engine Model	Cat® C13 In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1in x 6.2in)
Displacement	12.5 L (763 in ³)
Compression Ratio	16.3:1
Aspiration	Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

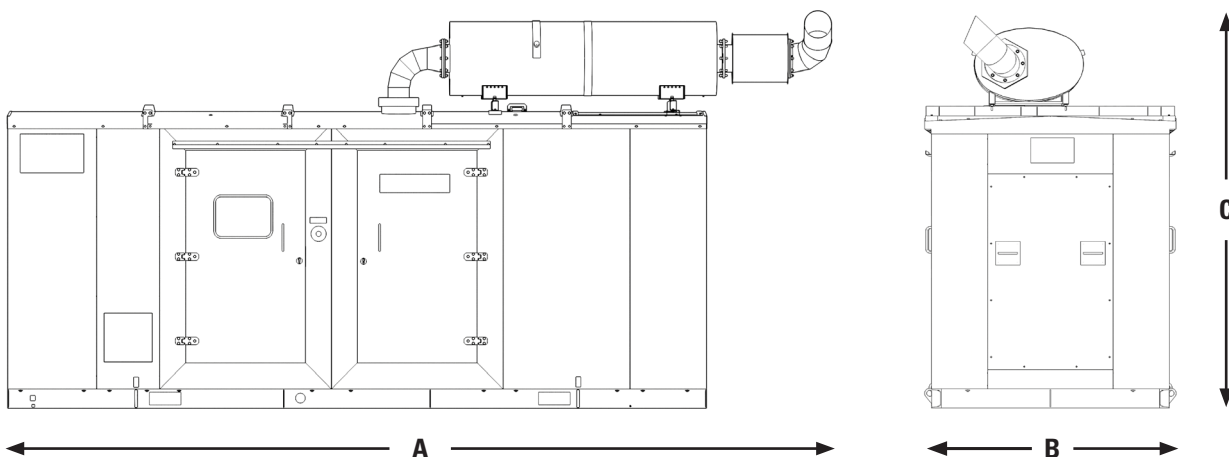
Model	Prime	Emission Strategy
C13	400 kVA 320 ekW	India CPCB/ MoEF Standards

PACKAGE PERFORMANCE

Performance	Prime
Frequency	50 Hz
Gen set 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	Prime
Voltages, Volts	415V
Motor Starting Capability @ 30% Voltage Dip, skVA	960 skVA
Current	556A
Frame Size	LC6124C
Excitation	AR
Temperature Rise	125 °C

WEIGHTS & DIMENSIONS



Note: General configuration not to be used for installation. See general dimension drawings for detail.

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

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.™

LEHE1718-03 (07/20)