Cat® C18 DIESEL GENERATOR SETS

Prime: 50 Hz; 415V

Picture shown may not reflect actual configuration.

GENSET SPECIFICATION

Genset Model	Cat® DE500
Genset Rating	500 kVA/400 ekW @1500 RPM, 415V / 50Hz
Emission Strategy	Meets India CPCB IV+ standard
Controller	GCCP1.3
Telematics	Factory fitted Product Link™ PL444
Fuel Tank	Integrated base mounted

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 as per CPCBIV+ 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 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.

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.

GCCP CONTROL PANELS

User- friendly set-up and button layout for ease of use. Multiple Parameters monitored and displayed simultaneously for full visibility. The module can be configured to suit wide range of applications for user flexibility.

ENGINE SPECIFICATION

Engine Model	Cat C18 In-line 6 Cylinder, 4-Cycle Diesel
Bore x Stroke	145 mm x 183 mm (5.7 in x 7.2 in)
Displacement	18.1 L (1106 in^3)
Compression Ratio	16:1
Aspiration	Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A6
Aftertreatment	Remote mounted, inside the enclosure

ALTERNATOR SPECIFICATION

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3rd Pitch
No. of Leads	06
Insulation	Class H
Protection Standard	IP23
Standard Temperature Rise	125°C
Available Excitation Options	Self-Excited
Voltage Regulation	±1%
Voltage Regulator	R150

STANDARD EQUIPMENT

Air Inlet System	Single element canister-type air cleaner Service indicator
Control Panels	GCCP1.3 Control Panel Emergency stop push button Product link generation – PL444
Cooling System	Radiator fan and belt drive Fan and belt guard Coolant drain line with valve Coolant level sensor Cat extended life coolant
Aftertreatment	Remote mounted Aftertreatment system Includes CEM, SCR, DOC and DEF DEF tank is located inside enclosure DEF tank capacity lasts for two full tank fuel fill
Fuel System	Primary and secondary fuel filters Electronic Fuel priming pump Auto/Manual switch control 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 R150 voltage regulator Power terminal strip connections IP 23 protection
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
General	SAE standard rotation Flywheel – SAE No.14 Flywheel housing – SAE No. 0.5 Paint – Caterpillar Yellow (except base rails, fuel tank and radiators gloss black)

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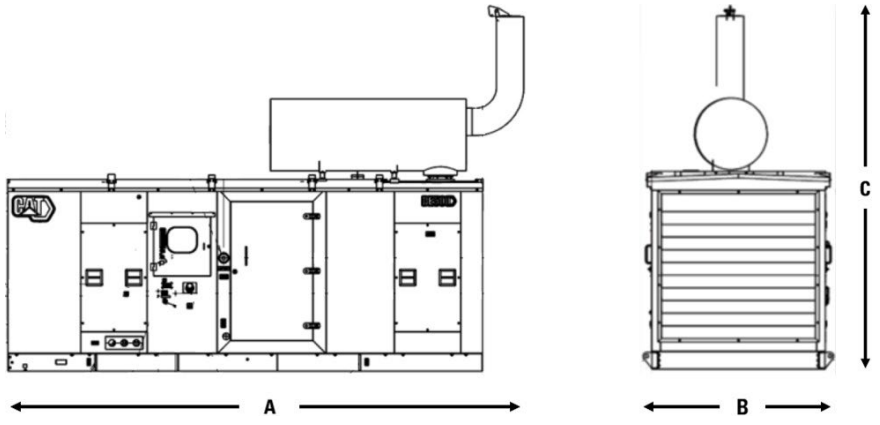
Model	Prime	Emission Strategy
C18	500 kVA/400 ekW	India CPCBIV+ Standards

PACKAGE PERFORMANCE

Performance	Prime
Frequency, Hz	50
Gen set power rating with fan @ 0.8 power factor, kVA	500
Engine Power Rating, BKW	432
Fueling strategy	India CPCB/ MoEF Standards
Performance number	EM6970
Fuel Consumption	
100% load with fan, L/hr (gal/hr)	101.6 (27)
75% load with fan, L/hr (gal/hr)	77.8 (21)
50% load with fan, L/hr (gal/hr)	52.3 (14)
25% load with fan, L/hr (gal/hr)	30.6 (8)
Cooling System[1]	
Radiator air flow restriction (system), kPa (in. Water)	0.097 (0.39)
Radiator air flow, m^3/min (cfm)	620 (21900)
Total cooling system coolant capacity, L (gal)	70 (19)
Inlet Air	
Combustion air inlet flow rate, m^3/min (cfm)	32.2 (1137)
Combustion air inlet temp, °C (°F)	50 (122)
Exhaust System	
Exhaust stack gas temperature, °C (°F)	523.2 (974)
Exhaust gas flow rate, m^3/min (cfm)	88.8 (3136)
Exhaust system backpressure (maximum allowable), kPa (in. water)	10.0 (40)
Heat Rejection	
Heat rejection to jacket water, kW (Btu/min)	139 (7905)
Heat rejection to exhaust (total), kW (Btu/min)	422 (23999)
Heat rejection to atmosphere from engine, kW (Btu/min)	34.4 (1956)
Heat rejection to atmosphere from generator, kW (Btu/min)	23.2 (1319)
Lube System	
Sump refill with filter, L (gal)	74 (19.5)
Alternator[2]	
Voltage, V	415
Motor Starting Capability @ 30% Voltage Dip skVA	1207
Current, A	696
Frame Size	LSAP47 C
Excitation	SE
Temperature Rise @ 40°C	125

WEIGHTS and DIMENSIONS



Genset Model	Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Generator Set Weight kg (lb)
500 kVA, 400 ekW	5932 (233.5)	2196 (86.4)	4194 (165.1)	6454 (14229)

***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

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.

APPLICABLE CODES AND STANDARDS

IEC60034-1, ISO3046, ISO8528, UKCA, CE, NEMA MG1-33, EAC, AS1359

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

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

Fuel Rates: To allow for a balanced comparison of fuel consumption figures between Cat and the competition, a set of Cat diesel generator set spec sheets has been created using a fuel density of 850 g/l (7.094 lbs/U.S. gal.) and a 0% /+5% tolerance on the brake specific fuel consumption per the ISO 3046-1 standard.

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

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