

Product Specifications For 3516B (50 Hz)



Generator Set Specifications

Standby Rating	2250 kVA
Prime Power Rating	2000 kVA
Emissions/Fuel Strategy	Low Fuel, Low Emissions
Voltage	380 to 11000 Volts
Frequency	50 Hz
Speed	1500 rpm
Duty Cycle	Standby, Mission Critical, Prime, Continuous
Maximum Rating	2250 kVA
Minimum Rating	1750 kVA

Engine Specifications

Engine Model	3516B TA, V-16, 4-Stroke Water-Cooled Diesel
Bore	170 mm
Stroke	190 mm
Displacement	4210.64 l
Compression Ratio	14.0:1
Aspiration	TA
Fuel System	Electronic unit injection
Governor Type	Adem™3

Generator Set Dimensions

Length - Minimum	6147 mm
Length - Maximum	6147 mm
Width - Minimum	2286 mm
Width - Maximum	2286 mm
Height - Minimum	2494 mm
Height - Maximum	2494 mm
Dry Weight - Genset (minimum)	13773 kg
Dry Weight - Genset (maximum)	13773 kg

3516B (50 Hz) Standard Equipment

Air Inlet System

Air cleaner; single element canister type

Cooling

Package mounted radiator

Exhaust

Exhaust flange outlet

Fuel

Primary fuel filter with integral water separator

Secondary fuel filters

Generator

Matched to the performance and output characteristics of Cat engines

IP23 Protection

Power Termination

Busbar

Control Panels

Engine cool-down timer
Frequency (Hz)
DC volts
Volts (L-L & L-N)
Customizable screens
Limiter and exciter diode monitor
Power factor (per phase & average)
1 Programmable relay outputs (Form C)
Text alarm/event descriptions
Speed adjust
1 Programmable digital outputs
Overspeed - Emergency stop
4 Programmable relay outputs (Form A)
Emergency stop - Failure to start (overcrank)
Reverse reactive power (kVAr) (32RV)
6 Customer programmable digital inputs
Customer data link (Modbus RTU)
Emergency stop pushbutton
Environmental sealed front face
kW-hr (total) - kVAr-hr (total)
Cat connect
Load histogram feature
RPM - DC volts
Failure to start (overcrank)
Serial annunciator module data link
Coolant temperature
Operating hours
kW (per phase, average & percent)
IVR includes:
Low coolant temperature
Reactive droop capability
Generator set packages include Caterpillar's voltage regulator
Digital indication for:
KVAR/PF modes
Lamp test
Controls:
PLC functionality
0 True RMS AC metering, 3-phase, +/-2% accuracy
Oil pressure (psi, kPa or bar)
Generator mounted - rear facing
Amps (per phase & average)
Low coolant level
3 Analog inputs
Reverse power (kW) (32)
24 Volt DC operation
Over/under voltage (2 7/ 59)

Over/under frequency (81 o/u)
RFI suppression
3 Phase voltage sensing
Cat ECS 100
Alarm acknowledge
Auto/start/stop control
kVA (per phase, average & percent)
Min / max exciter
Engine cycle crank
Low oil pressure
Accessory module data link
High coolant temperature
Warning/shutdown with common LED indication of shutdowns for:
Communications:
Overcurrent (50 / 51)
Number of I/O varies on options selected
Programmable protective relaying functions:

Control Panel

Cat ECS Genset controller

Cooling System

Certified standard PGS provided

Exhaust System

Dry exhaust manifold
Flanged faced outlet(s)

Fuel System

Secondary fuel filters
Flexible fuel lines - shipped loose
Fuel cooler; not included with packages without radiator
Fuel priming pump

General

Paint - Caterpillar yellow except rails and radiators gloss black
Right hand servicing
Flywheel and flywheel housing - SAE No. 00
SAE standard rotation
Caterpillar yellow with high gloss black rails and radiator

Generator And Attachments

Busbar connections, right side extension box, bottom cable entry
3 Phase brushless, Salient pole
Form wound - Permanent magnet excitation (PMG)

Anti-condensation space heater
Busbar connections, top center mounted, top cable entry
6 Leads
Winding temperature detectors
Class H temperature rise at 40C ambient (125C prime / 150C standby)
Form wound
Internal excitation (IE)
NEMA Class H insulation
Low voltage:
Random wound
High voltage:
Medium voltage:
Class H insulation, Class F temperature rise at 40C ambient (105C prime / 130C standby)
NEMA Class H insulation system, Class H temperature rise at 40C ambient (125C prime / 150C standby)
Permanent magnet excitation (PMG)
NEMA standard hole pattern

Governing System

ADEM A3

Literature

Parts book

Lubrication System

Fumes disposal
Oil drain lines and valve
Lubricating oil
Integral lube oil cool
Oil filter, filler and dipstick
Gear type lube oil pump

Mounting System

Rails - Engine/generator/radiator mounting
Anti-vibration mounts (shipped loose)
Rubber anti-vibration mounts - shipped loose

Starting System

Battery and battery rack w/cables
24 Volt electric starting motor
Battery disconnect switch
45 Amp Charging alternator

3516B (50 Hz) Optional Equipment

Control System

EMCP 4.4

Exhaust

Exhaust mufflers

Air Inlet System

Single element filter

Dual element air cleaner

Generator

Oversize and premium generators

Permanent magnet excitation (PMG)

Anti-condensation heater

Internal excitation (IE)

Cooling System

Standard ambient radiators

Coolant

Optional installed radiators

Optional installed ATAAC radiators

Standard ambient ATAAC radiators

Water level switch gauges

Power Termination

Circuit breakers, IEC compliant

Circuit breakers, UL listed

Crankcase System

Ventilation system

Explosion relief valves

No explosion relief valves

Control Panels

Remote monitoring software

Load share module

Digital I/O module

Generator temperature monitoring & protection

Exhaust System

Y Adapters

Elbows

Mufflers

Flange and exhaust expanders

Clean emission parts

Tier 4 dosing cabinet
Exhaust offset
Flexible fittings
Tier 4 clean emission MOD Kits
Flanges
Tier 4 clean emissions module

Fuel System

Primary fuel filter
Fuel priming pumps (Tier 4) - Manual or electric

Starting/Charging

Air starting motor with control and silencer
Charging alternator
Oversize batteries
Heavy duty starting system

Generators And Attachments

Differential current transformers (DCT)
Thermostat for space heater
Differential current transformers (DCT) 8.7 kV and 15 kV classes
Alternator air cleaner
Generator conversion
Space heater
Low / Medium voltage: 380/400/415 volts, 3 phase 1500 rpm. RW, IE, No. of Leads = 6, Pitch = .6667: 160(Frame
Low / Medium voltage: 380/400/415 volts, 3 phase 1500 rpm. RW, PM, No. of Leads = 6, Pitch = .6667: 16(and 1800 Frames

Instrumentation

Pyrometer and thermocouples

General

Special paint (Colors other than Caterpillar yellow or high performance paints)
US aid emblem
EEC Declaration of Conformity
Automatic transfer switches (ATS)
CSA Certification
Seismic Certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
Enclosures: Sound attenuated, weather protective
The following options are based on regional and product configuration:
Integral & sub-base fuel tanks
EU Certificate of Conformance (CE)
Integral & sub-base UL listed dual wall fuel tanks
UL 2200 package

Lubrication System

Lube oil in standard sump
Oil level regulator
Pre-lube pumps

Mounting System

IBC vibration isolators
Spring type vibration isolators
Puck style low efficiency isolators

Mounting

IBC isolators

Power Connections

Neutral ground connections
Center post busbars
Low voltage Circuit breakers
2700 Frame, four lead, four terminal
Right side power connections
Ground cables between generator and terminal box
Rear power connections
Left side power connections

Special Tests / Reports

Standard engine test charge
Torsional vibration analysis reports
PGS Test report @ 1.0 power factor
Fuel consumption test
IBC Certification
Canadian Standards Association certification
PGS Test report @ 0.8 power factor
Generator test report
Generator set fuel consumption test
OSHDP Certification

Starting And Charging

Air starting motors
Jacket water heaters
Starter cover
10, 20, 35 and 50 Amp Battery chargers
Air pressure regulator
Electric starting motors
Engine barring device
24 Volt battery set - Dry

Extended Service Coverage

Platinum, Gold and Silver coverage