


Product Specifications For 3512 (60 Hz)



Generator Set Specifications

Standby Rating	1250/1100 ekW
Prime Power Rating	1135/1000 ekW
Emissions/Fuel Strategy	Low Fuel Consumption
Voltage	380 to 13800 Volts
Frequency	60 Hz
Speed	1800 rpm
Duty Cycle	Standby, Mission Critical, Prime, Continuous
Maximum Rating	1250 ekW
Minimum Rating	890 ekW

Engine Specifications

Engine Model	3512 TA, V-12, 4-Stroke Water-Cooled Diesel
Bore	6.69 in
Stroke	7.48 in
Displacement	3161.03 in³
Compression Ratio	13.5:1
Aspiration	TA
Fuel System	Direct Unit Injection
Governor Type	Woodward

Generator Set Dimensions

Length - Minimum	214.8 in
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Length - Maximum	218.8 in
Width - Maximum	77.8 in
Height - Maximum	93.2 in
Dry Weight - Genset (minimum)	22210 lb
Dry Weight - Genset (maximum)	22650 lb

3512 (60 Hz) Standard Equipment

Air Inlet System

Air cleaner; single element canister type with service indicator

Air Inlet

Air cleaner

Cooling

Radiator fan and fan drive
JWAC.

Exhaust

Exhaust flange outlet
Dry exhaust manifold

Fuel

Secondary fuel filters
Primary fuel filter with integral water separator
Fuel cooler; not included with packages without radiator
Secondary fuel filters
Fuel priming pump

Generator

IP23 Protection
Matched to the performance and output characteristics of Cat engines

Power Termination

Busbar

Control Panel

Accessory module data link
Features include:
Over/under voltage (27 / 59)
Coolant temperature
Generator phase sequence
Serial annunciator module data link
Low coolant temperature
Low oil pressure
DC volts

Over/under voltage (27/59)
Auto/start/stop control
Exciter diode monitor
Failure to start (overcrank)
6 programmable digital inputs
Emergency stop
Generator mounted - rear facing
Programmable protective relaying functions:
Power factor (per phase & average)
Alarm acknowledge
DC volts
kVA (per phase, average & percent)
Overspeed
IVR includes:
RFI suppression
Emergency stop pushbutton
Package mounted radiator (except C175)
Overspeed
Emergency stop
kVAr (per phase, average & percent)
Environmental sealed front face
Customer data link (Modbus RTU)
Min / max exciter limiter
Speed adjust
Operating hours
True RMS AC metering, 3-phase, +/-2% accuracy
Reactive droop capability
Customizable screens
Volts (L-L & L-N)
PLC functionality
Digital indication for:
RPM
High coolant temperature
Digital indication for:
kW-hr (total)
Over/under frequency (81 o / u)
Low coolant temperature
24 Volt DC operation
kW-hr (total)
Oil pressure (psi, kPa or bar)
Warning/shutdown with common LED indication of shutdowns for:
kVAr-hr (total)
EMCP 4.2B
2 Programmable relay outputs (Form C)
kVAr-hr (total)
kW (per phase, average & percent)
kVAr (per phase, average & percent)
Engine cool-down timer
Over/under frequency (81 o/u)
Engine cool-down timer
True RMS AC metering, 3-phase, +/-2% accuracy
Low coolant level
Frequency (Hz)
Controls:
Generator phase sequence
High coolant temperature
Communications:
Reverse power (kW) (32)
Volts (L-L & L-N), frequency (Hz)
Alarm acknowledge
Environmental sealed front face
Controls:
Operating hours
Generator mounted - rear facing

Power factor (per phase & average)
kW (per phase, average & percent)
Programmable protective relaying functions:
Engine cycle crank
Reverse power (kW) (32)
24 Volt DC operation
Lamp test
Text alarm/event descriptions
Failure to start (overcrank)
Generator set packages include Caterpillar's voltage regulator (IVR)
Warning/shutdown with common LED indication of shutdowns for:
Text alarm/event descriptions
4 programmable relay outputs (Form A)
Lamp test
Load histogram feature
Coolant temperature
Auto/start/stop control
Overcurrent (50 / 51)
kVA (per phase, average & percent)
KVAR/PF modes
Engine cycle crank
3 Phase voltage sensing
2 Programmable digital outputs
Low oil pressure
Reverse reactive power (kVAr) (32RV)
EMCP 4 Genset controller
RPM
Oil pressure (psi, kPa or bar)
Amps (per phase & average)
Low coolant level
Amps (per phase & average)
EMCP4.2 controller includes:

Cooling System

Radiator fan and fan drive
Fan and belt guards
JWAC
Caterpillar extended life coolant
Coolant level sensors
Coolant drain line with valve

Exhaust System

Dry exhaust manifold.
Exhaust flange outlet

Fuel System

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

Generators And Attachments

LV
Winding temperature detectors
3 phase brushless, Salient pole
1800 Frames are Form wound, Permanent magnet excitation (PMG), with winding temperature detectors
NEMA Class H insulation system, Class H temperature rise at 40C ambient (125C prime/150C standby)
Generator set packages include Caterpillar's digital voltage regulator (CDVR)
CDVR includes reactive droop capability, 3-phase voltage sensing, KVAR/PF modes, RFI suppression, min/max exciter. Limiter and exciter diode monitor
6 Lead

Internal excitation (IE)

Busbar connections, top center mounted, top cable entry. 50 Hz models: IEC standard hole pattern

Random wound

Governing System

Woodward 2301A isochronous governor

Lube System

Integral lube Oil cooler

Oil filter, filler and dipstick

Oil drain lines and valve

Fumes disposal

Gear type lube oil pump.

Lubricating oil

Mounting System

Rubber anti-vibration mounts - shipped loose

Rails - engine/generator/radiator mounting

Starting / Charging System

Battery disconnect switch

Battery and battery rack w/cables

24 Volt electric starting motor

Generator And Attachments

Random wound

LV

6 Lead

3 phase brushless, Salient pole

General

Right hand servicing

Caterpillar yellow with high gloss black rails & radiator

Flywheel and Flywheel housing-SAE No. 00

SAE standard rotation

Paint - Caterpillar yellow except rails and radiators gloss black

3512 (60 Hz) Optional Equipment

Exhaust

Exhaust mufflers

Air Inlet System

Air inlet protection

Air cleaner - Dual element

Remote air inlet adapters

Generator

Oversize and premium generators

Internal excitation (IE)

Permanent magnet excitation (PMG)

Anti-condensation heater

Circuit Breakers

Breaker harnesses

EMAX breaker connections
EMAX breakers
Enclosures - Control packaging
Cable entry options
Low voltage, IEC standard hole
Optional busbar power connections
Busbar connections

Power Termination

Circuit breakers, IEC compliant
Circuit breakers, UL listed

Control Panels

Annunciator modules
Customer interface options
Auxiliary box
Mounting group - External box clips
Governors
Generator temperature monitoring

Cooling System

Heat exchangers
3512 MUI 1500 Radiators PGS
Water level switch gauges

Mounting

Spring type vibration isolators
IBC isolators
Rubber anti-vibration mounts

Certificates

EU Declaration of Conformity
Eurasian Conformity (EAC) mark
European union certification
European Directive genset, DoI (Declaration of Incorporation)

Starting/Charging

Jacket water heater
Battery chargers
Charging alternator
Heavy duty starting system
Oversize batteries
Air starting motor with control and silencer

Exhaust System

Flexible fittings
Mufflers
Through wall installation kit

Fuel System

Primary fuel filter

Generators And Attachments

Space heater kit
Generator conversions - IE and PM

Instrumentation

Pyrometers

Lube System

Oil level reg-1 shallow pan
Manual prelube sump pumps
Electric prelube pumps

Mounting System

Vibration isolator options

Protection System

Explosion relief valves

Special Tests / Reports

PGS Test report @ 0.8 power factor
Neutral ground - LV
PGS Test report @ 1.0 power factor
IBC seismic Certification
Neutral grounding connection

Starting / Charging System

Battery chargers (10 and 20 amp)
Battery sets - 24 Volt, dry
Electric starting motors - Dual 24 Volt
Charging alternators
Jacket water heaters
Starting aids

General

Integral & sub-base fuel tanks
Enclosures: Sound attenuated, weather protective
Engine barring group - installed
Seismic Certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
CSA Certification
Integral & sub-base UL listed dual wall fuel tanks
The following options are based on regional and product configuration:
Automatic transfer switches (ATS)
UL 2200 package
EU Certificate of Conformance (CE)
EEC Declaration of Conformity