



# PRODUCT SPECIFICATIONS FOR 3512 (50 HZ)



TST CO.  
www.TST-CO.com

---

## GENERATOR SET SPECIFICATIONS

---

<b>Minimum Rating</b>	1000 kVA
<b>Maximum Rating</b>	1400 kVA
<b>Emissions/Fuel Strategy</b>	Low Fuel Consumption
<b>Voltage</b>	380 to 415 Volts
<b>Frequency</b>	50 Hz
<b>Speed</b>	1500 rpm
<b>Duty Cycle</b>	Standby, Mission Critical, Prime, Continuous

---

## ENGINE SPECIFICATIONS

---

<b>Engine Model</b>	3512 TA, V-12, 4-Stroke Water-Cooled Diesel
<b>Bore</b>	170 mm
<b>Stroke</b>	190 mm
<b>Displacement</b>	51.8 l
<b>Compression Ratio</b>	13.5:1
<b>Aspiration</b>	TA
<b>Fuel System</b>	Direct Unit Injection
<b>Governor Type</b>	Woodward

---

## GENERATOR SET DIMENSIONS

---

<b>Length - Minimum</b>	5149 mm
<b>Length - Maximum</b>	5249 mm
<b>Width - Maximum</b>	1975 mm

<b>Height - Maximum</b>	2367 mm
<b>Dry Weight - Genset (minimum)</b>	10270 kg
<b>Dry Weight - Genset (maximum)</b>	10510 kg

---

## 3512 (50 HZ) STANDARD EQUIPMENT

### AIR INLET SYSTEM

Air cleaner; single element canister type with service indicator

### CONTROL PANEL

EMCP4.2B controls including: Emergency stop pushbutton

RPM

Engine cool-down timer

EMCP4.2B controller including:

Accessory module data link

4 programmable relay outputs (Form A)

Communications:

Volts (L-L & L-N)

Over / under frequency (81 o / u)

Text alarm / event descriptions

Auto / start / stop control

Speed adjust

kVA (per phase, average & percent)

Overcurrent (50 / 51)

Alarm acknowledge

Environmental sealed front face

6 programmable digital inputs

Oil pressure (psi, kPa or bar)

Amps (per phase & average)

Generator phase sequence

2 programmable digital outputs

Low coolant temperature

Controls:

Serial annunciator module data link

Reverse Power (kW) (32)

Lamp test

Coolant temperature

Engine cycle crank

kVAr-hr (total)

2 programmable relay outputs (Form C)

Generator mounted - rear facing

24-volt DC operation

kVAr (per phase, average & percent)

Warning/shutdown with common LED indication of shutdowns for:

kW (per phase, average & percent)

Reverse Reactive Power (kVAr) (32RV)

Programmable protective relaying functions:

Digital indication for:

High coolant temperature

Low oil pressure

Overspeed

Over / under voltage (27 / 59)

Customer data link (Modbus RTU)

DC volts

Operating hours

Low coolant level

kW-hr (total)

Frequency (Hz)

Emergency stop

Power Factor (per phase & average)

Failure to start (overcrank)

True RMS AC metering, 3-phase, +/-2% accuracy

## COOLING SYSTEM

JWAC

Caterpillar extended life coolant. (Not included with packages without radiator, installed SF44CTS, shipped loose radiators or heat exchangers)

Radiator fan and fan drive

Fan and belt guards

Coolant drain line with valve

Coolant level sensors. (Not included with packages without radiator)

## EXHAUST SYSTEM

Dry Exhaust Manifold

Flanged faced outlet(s)

## FUEL SYSTEM

Fuel cooler; not included with packages without radiator

Flexible fuel lines - shipped loose

Fuel priming pump

Secondary fuel filters

## GENERATORS AND ATTACHMENTS

Generator set packages include: Regulator (CDVR)

6 Lead

Min / max exciter limiter

LV:

Reactive droop capability

Random wound

Exciter diode monitor

KVAR/PF modes

NEMA Class H insulation

50 Hz models: IEC standard hole pattern

Caterpillar's Digital Voltage Regulator (CDVR) includes:

Note: 1800 frames are form wound, permanent magnet, with winding temp detectors

Busbar connections, top center mounted, top cable entry

Internal Excitation

Winding temperature detectors

Class H temperature rise at 40C ambient (125C prime/150C standby)

3 Phase brushless, salient pole

3 Phase voltage sensing

RFI suppression

#### GOVERNING SYSTEM

Woodward 2301A isochronous governor

#### LUBE SYSTEM

Oil drain lines and valve

Gear type lube oil pump

Fumes disposal

Oil filter, filler and dipstick

Lubricating oil

Integral lube oil cooler

#### MOUNTING SYSTEM

Rubber anti-vibration mounts (shipped loose)

Rails - engine/generator/radiator mounting

#### STARTING / CHARGING SYSTEM

24 Volt electric starting motor

Battery and battery rack w/cables

Battery disconnect switch

## GENERAL

Paint - Caterpillar Yellow with high gloss black rails & radiator

SAE Standard Rotation

RH Service

Flywheel and Flywheel housing - SAE No. 00

## 3512 (50 HZ) OPTIONAL EQUIPMENT

### AIR INLET SYSTEM

Remote air inlet adaptors

Air Inlet protection

Dual Element air cleaners

### CIRCUIT BREAKERS

EMAX circuit breakers

Center posts busbars

EMAX breakers connections

Breaker harnesses

2000, 2500, 3200 and 4000 Amp, 4 pole, IEC rated circuit breakers

Controls packaging - Enclosures

Cable entry options

2000, 2500, 3200 and 4000 Amp, 3 pole, IEC rated circuit breakers

Optional busbar power connections

Busbar connections

### CONTROL PANEL

Auxiliary Boxes

Customer connection mounting locations

Ground (Automatically selected)

Vandle proof panel door

Customer Interface Options

Mounting Group - External Box Clips

Remote speed adjust

Generator Temperature Monitoring

Governors

Annunciator Modules

Local PC monitoring

#### COOLING SYSTEM

Water level switch gauges

Heat exchangers

Optional radiator arrangements

#### EUROPEAN CERTIFICATIONS

EU declaration of conformity

Eurasian conformity (EAC) mark

European directive genset, DoI (Declaration of Incorporation)

European Union Certification

#### EXHAUST SYSTEM

Through-wall installation kit

Muffler mounting kits

Mufflers

Flexible fittings

#### FUEL SYSTEM

Primary fuel filter

#### GENERATORS AND ATTACHMENTS

380 / 400 / 415 Volts @ 50 Hz, 3 phase, form wound, permanent magnet, No. of leads = 6, pitch= 0.6667

380/400/415volts @ 50 Hz, 3 phase, random wound, permanent magnet, No. of leads = 6, pitch= 0.6667

Generator conversion

380/400/415volts @ 50 Hz, 3 phase, random wound, internal excitation, No. of leads = 6, pitch= 0.6667

Space heater

## INSTRUMENTATION

Pyrometer and thermocouples

## LUBE SYSTEM

Electric prelube pumps

Oil level Reg-1 shallow pan

Manual prelube sump pumps

## MOUNTING SYSTEM

Spring-type vibration isolator

IBC vibration isolators

## PROTECTION SYSTEM

Explosion relief valve

## SPECIAL TESTS / REPORTS

Neutral grounding connection

IBC seismic certifications

Neutral ground-LV

PGS test report @ 1.0 power factor

PGS test report @ 0.8 power factor

## STARTING / CHARGING SYSTEMS

Ether starting aid

24 Volt dual electric starting motor

20 Amp battery charger

Oversize battery set

Jacket water heaters

10 Amp battery chargers

## GENERAL

Engine barring group