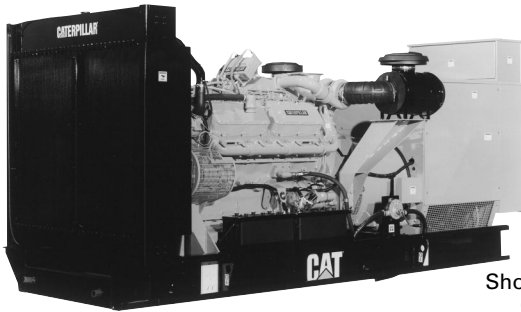


CATERPILLAR®



Shown with
Optional
Equipment

FEATURES

■ FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

■ SINGLE-SOURCE SUPPLIER

- Complete systems designed and built at Caterpillar ISO certified facilities
- **Certified Prototype Tested** with torsional analysis

■ WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1,200 dealer outlets operating in 166 countries, you're never far from the Caterpillar part you need.
- 99.5% of parts orders filled within 48 hours. The best product support record in the industry.
- Caterpillar dealer service technicians are trained to service every aspect of your electric power generation system.
- Preventive maintenance agreements
- The Cat Scheduled Oil Sampling (S•O•SSM) program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

■ MEETS OR EXCEEDS INTERNATIONAL SPECIFICATIONS: ABGSM TM3, AS 1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC 34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG1, VED0530, 89/392/EEC, 89/336/EEC

■ CAT® 3412 DIESEL ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight

Generator Set

600 kW

1800 rpm

60 Hz

Standby Power

Caterpillar is leading the power generation marketplace with Package Generator Sets engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

■ CAT® SR4B GENERATOR

- Designed to match performance and output characteristics of Caterpillar diesel engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Segregated AC/DC, low voltage accessory box provides single point access to accessory connections

■ CAT® CONTROL PANELS

- Four levels of controls, designed to meet individual customer needs.
- Switchgear conversion using Caterpillar electronic monitoring system provides state-of-the-art engine monitoring and protection while providing a simple interface to separate floorstanding switchgear.
- Microprocessor based Electronic Modular Control Panel (EMCP II and EMCP II+) use digital metering and true RMS monitoring to provide advanced monitoring, metering, control, and protective relaying capabilities. Fully compatible with Caterpillar annunciators, and remote communication and expansion modules.
- EMCP II+ paralleling panel provides fully automatic and manual permissive paralleling capability. Synchronizing and load sharing are added to EMCP II+ power metering and protective relaying to provide a state-of-the-art paralleling system which is self contained within the generator set.



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

SYSTEM	STANDARD	OPTIONAL
Air inlet	modular air cleaner, single element with dust evacuator service indicator	dual element air cleaner heavy-duty air cleaner
Cooling	radiator with guard coolant drain line with valve fan and belt guards Caterpillar Extended Life Coolant low coolant level shutdown	radiator duct flange jacket water heater with isolation valves heat exchanger and expansion tank
Exhaust	stainless steel exhaust flex and ANSI weld flange	industrial grade muffler and ANSI weld flanges 25 dB(A) muffler and ANSI weld flanges 35 dB(A) muffler and ANSI weld flanges muffler mounting kit, through-wall installation kit engine exhaust guarding
Fuel	primary fuel filter secondary fuel filter fuel priming pump flexible fuel lines	water separator manual transfer pump automatic transfer systems, 3 configurations low fuel level alarm and shutdown
Generator	self excited class F temperature rise 266° F (130° C) standby reactive droop kit	permanent magnet excitation 2:1 Volts/Hz AVR Digital Voltage Regulator (D.V.R.) D.V.R. with KVAR/PF control anti-condensation space heater oversize and premium generators circuit breaker, IEC compliant 3-pole with shunt trip circuit breaker, IEC compliant, 4-pole with shunt trip
Governor	hydra-mechanical	electronic isochronous load sharing
Control panels	EMCP II	switchgear conversion EMCP II+ system expansion modules
Lube	lubricating oil oil drain line with valves fumes disposal	manual sump pump
Mounting	formed steel base linear vibration isolators between base and engine-generator	fuel tank base extended capacity fuel tank base skid base
Starting/ charging	45 amp charging alternator fuel shutoff solenoid 24 volt starting motor batteries with rack and cables	heavy-duty starting system integral 5 and 10 amp battery chargers oversize batteries ether starting aid battery disconnect
Other		enclosures – sound attenuated, weather protective automatic transfer switch CE certification

TECHNICAL DATA

600 kW/750 kV•A Standby Power Generator Set – 1800 rpm/60 Hz

Package Performance Power rating @ 0.8 PF with fan	kW kV•A	600 750
Fuel Consumption 100% Load with Fan 75% Load with Fan	gph gph	44.5 33.8
Cooling System Ambient Air Temperature (Consult T.M.I.) Designed for operation up to Air Flow Restriction (After Radiator) Standard Radiator Arrangement Data Air Flow (Max @ Rated Speed) Engine Coolant Capacity with Radiator Engine Coolant Capacity without Radiator	Deg F in water cfm gal gal	122 .48 41 949 29.9 16
Exhaust System Combustion Air Inlet Flow Rate Exhaust Gas Stack Temperature Exhaust Gas Flow Rate Exhaust Flange Size — (Internal Diameter) System Backpressure (Max. Allowable)	cfm Deg F cfm in in water	1875 907 5018 8 27
Heat Rejection Heat Rejection to Coolant (Total) Heat Rejection to Exhaust (Total) Heat Rejection to Atmosphere from Engine Heat Rejection to Atmosphere from Generator	BTU/min BTU/min BTU/min BTU/min	22 066 34 918 7336 2150

Deration: Generator set is designed to operate in ambient temperatures up to 122° F (50° C) and at higher altitudes. Please consult factory for available outputs.

CAT® 593 FRAME GENERATOR SPECIFICATIONS

Type ... Self excited, static regulated, brushless
Construction..... Single bearing, close coupled
Three phase 12 lead reconnectable
Insulation..... Class H with tropicalization
and antiabrasion
Enclosure Drip proof IP22
Alignment..... Pilot shaft
Overspeed capability..... 150%
Wave form..... Less than 5% deviation
Paralleling capability..... Standard
Voltage regulator 3-phase sensing with
Volts-per-Hertz
Voltage regulation.. Less than $\pm 1/2\%$ (steady state)
Less than $\pm 1\%$ (no load to full load)
Voltage gain Adjustable to compensate for
engine speed droop and line loss
TIF Less than 50
THD Less than 5%

CAT® 3412 TTA ENGINE SPECIFICATIONS

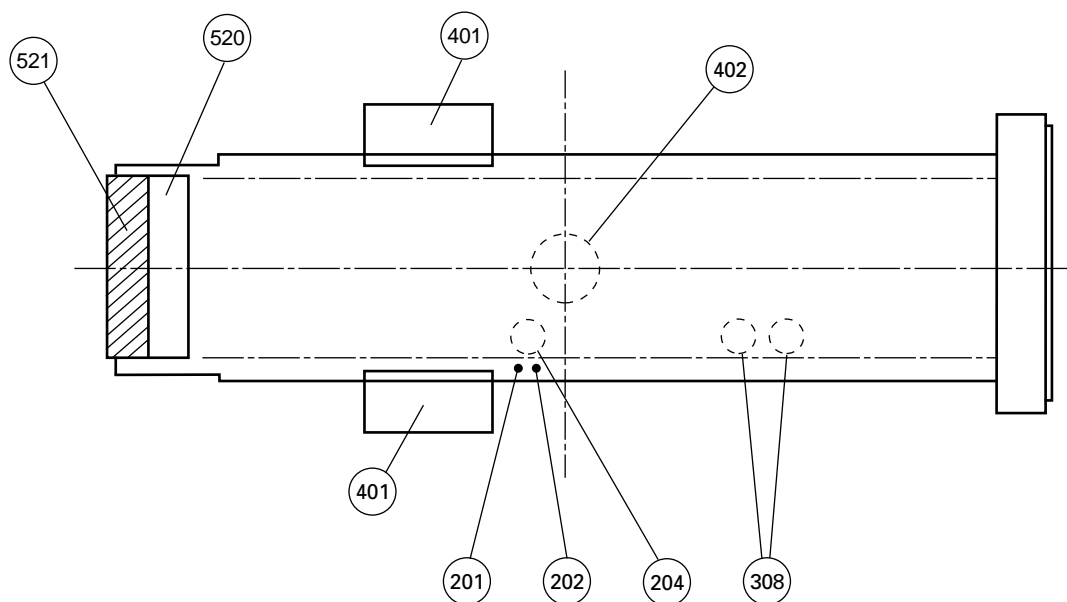
V-12, 4-Stroke-Cycle Watercooled Diesel
Bore — in (mm) 5.4 (137)
Stroke — in (mm)..... 6.0 (152)
Displacement — cu in (L) 1649 (27.0)
Compression ratio 14.5:1
Aspiration Turbocharged-
Jacket Water Aftercooled

CAT® CONTROL PANEL

24 Volt DC Control

NEMA 1, IP22 enclosure
Electrically dead front
Lockable hinged door
Generator instruments meet ANSI C-39-1
Terminal box mounted
Single location customer connector point
EC compliant — segregated AC/DC connection

Consult your Caterpillar dealer for available voltages.

STANDBY POWER GENERATOR SET PACKAGE — TOP VIEW


- | | | |
|--------------------------|-------------------|-------------------------------|
| (201) Fuel Inlet | (308) Oil Filter | (520) Control and Power Panel |
| (202) Excess Fuel Return | (401) Air Cleaner | (521) Conduit Entrance |
| (204) Fuel Filter | (402) Exhaust | |

PACKAGE DIMENSIONS		
Length	in (mm)	181.8 (4618)
Width	in (mm)	68.9 (1750)
Height	in (mm)	76.4 (1940)
Shipping Weight	lb (kg)	10 200 (4630)

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

RATING DEFINITIONS AND CONDITIONS

Standby — Output available with varying load for the duration of the interruption of the normal source power. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

Fuel rates are based on fuel oil of 35° API (60° F or 16° C) gravity having an LHV of 18 390 Btu/lb (42 780 kJ/kg) when used at 85° F (29° C) and weighing 7.001 lbs/U.S. gal. (838.9 g/liter).

Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.