

Image shown may not reflect actual package.

STANDBY 440 ekW 550 kVA 50 Hz 1500 rpm 400 Volts

Caterpillar® is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

ENCLOSURES (optional)

Weather protective and sound attenuated

SINGLE-SOURCE SUPPLIER

- Complete systems designed and built at Caterpillar ISO certified facilities.
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1844 dealer branch stores operating in 166 countries, you're never far from the Caterpillar part you need
- 99.7% of parts orders filled within 24 hours. The best product support record in the indus-
- · 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 byproducts



CAT® 3412C T 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
- UL 2200 Listed packages are available. Certain restrictions may apply. Consult with you Caterpillar dealer



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 low voltage, AC/DC accessory box provides single point access to accessory connections
- UL 1446 Recognized Class H insulation system

CAT CONTROL PANELS

- Four levels of controls, designed to meet individual customer needs:
- EMCP II provides digital monitoring, metering, and protection
- UL 508A Listed
- EMCP II+ provides EMCP II features along with full-featured power metering and protective relaying
- EMCP II+ Auto-Paralleling provides EMCP II+ features along with synchronization and load sharing
- Switchgear conversion provides easy interface

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional	
Air Inlet	Single element canister type air cleaner	Dual element air cleaner	
	Service indicator	Heavy-duty air cleaner	
Cooling	Radiator with guard and duct flange	Radiator duct flange	
	Coolant drain line with valve	Jacket water heater with shutoff valve	
	Fan and belt guards	Heat exchanger and expansion tank	
	Caterpillar Extended Life Coolant		
	Low coolant level alarm or shutdown		
Exhaust	Stainless steel exhaust flex and ANSI outlet flange	• Mufflers (20, 25, or 30 dBA)	
		Elbow kit and through-wall installation kit	
		Manifold and turbocharger guards	
Fuel	Primary and secondary fuel filters	Manual transfer pump	
	Water separator	Choice of three Automatic Transfer Systems	
	Fuel priming pump	Low fuel level alarm	
	Flexible fuel lines		
	Fuel pressure gauge		
Generator	Self excited	Permanent magnet excited	
	Class H insulation	Digital Voltage Regulator	
	Class F temperature rise (105°C prime/130°C stand-	Digital Voltage Regulator with KVAR/PF control	
	by)	Anti-condensation space heater	
	VR6 Voltage Regulator, 3-phase sensing, 2:1 Volts/Hz	Oversize and premium generators (648 ekW	
	Reactive droop Extension box	Prime/720 ekW Standby)	
	Bus bar connection	Circuit breakers, IEC Compliant, 3-pole or 4-pole with	
Governor		shunt trip • Electronic isochronous	
Governor	Hydra-mechanical	Electronic load sharing	
		Governor control motor	
Control Panels	• EMCP II	• EMCP II+	
Control Patiers	• EIVICE II	• EMCP II+ with Auto-Paralleling	
		Switchgear conversion	
		Customer Communication Module	
		Local alarm and remote annunciator modules	
Lube	Lubricating oil and filter	Manual sump pump	
Lube	Oil drain line with valves	Wandar samp pamp	
	• Fumes disposal		
Mounting	Formed steel base	Skid base	
Mounting	Linear vibration isolators between base and engine-	• Fuel tank base	
	generator	Extended capacity fuel tank base	
Starting/Charging	• 45 amp charging alternator	Heavy-duty starting system	
	Energized to Run (ETR) fuel shutoff solenoid	• 5 or 10 amp battery charger	
	• 24 volt starting motor	Oversize batteries	
	Batteries with rack and cables	Ether starting aid	
		Battery disconnect switch	
General		Enclosures - sound attenuated, weather protective	
		Automatic transfer switches (ATS)	
		Floor standing circuit breakers	
		EU Certificate of Conformance (CE)	

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SPECIFICATIONS



CAT SR4B GENERATOR

Frame Size	
Excitation	Self Excited
Pitch	
Number of poles	
Number of bearings	Single Bearing
Insulation .UL 1446 Recognized Class	H with tropicalization and
	antiabrasion
IP Rating	Drip Proof IP22
Alignment	
Overspeed capability - % of rated	
Wave form	Less than 5% deviation
Paralleling kit/Droop transformer	Standard
Voltage regulator3 Phase sensitive	ing with selectible volts/Hz
Voltage regulation Less t	han +/- 1/2% (steady state)
Less than +	-/- 1% (no load to full load)
Telephone Influence Factor	Less than 50
Harmania diatantian	Loop than EO/



CAT DIESEL ENGINE

3412C T, V-12, 4-stroke-cycle watercooled diesel
Bore - mm
Stroke - mm
Displacement - L
Compression ratio14.5 TO 1
Aspiration
Fuel SystemMechanical pump and line
Governor type

CAT CONTROL PANELS

- EMCP II
- 24 Volt DC Control
- NEMA 1, IP22 enclosure
- · Electronically dead front
- Lockable hinged door
- Generator instruments meet ANSI C-39-1
- Terminal box mounted
- Single location customer connection point
- EC compliant segregated AC/DC connections
- Panel illuminating lights
- Auto start/stop control
- · Voltage adjust potentiometer
- True RMS AC metering
- · Digital indications for:
- rpm
- Operating hours
- Oil pressure
- Coolant temperature
- System DC volts
- AC volts, phase amps, Hz
- Shutdown with indicating lights for:
- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency Stop
- Failure to start (overcrank)

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TECHNICAL DATA

Open Generator Set - — 1500 rpm/50 Hz/400 Volts	STAND	STANDBY TM3204	
Package Performance			
Power rating @ 0.8 pf	550 kVA		
Power rating	440 ekW		
Fuel Consumption			
100% load with fan	121.4 L/hr	32.1 Gal/hr	
75% load with fan	94.6 L/hr	25.0 Gal/hr	
50% load with fan	65.0 L/hr	17.2 Gal/hr	
Cooling System*			
Ambient air temperature	50 Deg C	122 Deg F	
Air flow restriction (system)	.12 kPa	0.48 in. water	
Air flow (max @ rated speed for radiator	505 m3/min	17,834 cfm	
arrangement)			
Engine coolant capacity	57.0 L	15.1 Gal	
Exhaust System			
Combustion air inlet flow rate	31.4 m3/min	1,108.9 cfm	
Exhaust stack gas temperature	594.0 Deg C	1,101 Deg F	
Exhaust gas flow rate	97.0 m3/min	3,425.5 cfm	
Exhaust flange size (internal diameter)	203.2 mm	8.0 in	
Exhaust system backpressure (maximum allowable)	6.7 kPa	26.9 in. water	
Heat rejection			
Heat rejection to coolant (total)	277 kW	15,753 Btu/min	
Heat rejection to exhaust (total)	459 kW	26,103 Btu/min	
Heat rejection to atmosphere from engine	80 kW	4,550 Btu/min	
Heat rejection to atmosphere from generator	32.45 kW	1,845.43 Btu/min	
Alternator**			
Motor starting capability @ 30% voltage dip	723 skVA		
Frame	592		
Temperature Rise	130 Deg C		
Lube System			
Lube oil refill volume with filter change for	139.0 L	36.7 Gal	
standard sump			
*Ambient capability at 200 m (660 ft) above see level. For ambient	1.111	II 0 1 111	

^{*}Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer.

^{**}Generator temperature rise is based on a 40 degree C ambient per NEMA MG1-32.

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RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: · ABGSM TM3, AS1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG 1-22, VDE0530, 89/392/EEC, 89/336/EEC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514. Standby ambients shown indicate ambient temperature at 100 percent load which results in a coolant top tank temperature just below the shutdown temperature.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

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

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



Package Dimensions				
Length	4485.0 mm	176.57 in		
Width	1748.4 mm	68.83 in		
Height	1986.7 mm	78.22 in		
Weight	6214 kg	13,700 lb		

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #1540168).



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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.