

Image shown may not reflect actual package.

PRIME 725 ekW 906 kVA 60 Hz 1800 rpm 480 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 TA 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	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		
Exhaust	Low coolant level alarm or shutdown	NA (() (00.05 00.1DA)	
Exnaust	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	
1 401	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) • VR3F Voltage Regulator, 3-phase sensing, 2:1	Anti-condensation space heater Oversize and premium generators	
	Volts/Hz	Circuit breakers, IEC Compliant, 3-pole or 4-pole with	
	Reactive droop	shunt trip	
	• Extension box	onan and	
	Bus bar connection		
Governor	PEEC - Cat Electronic	Electronic isochronous	
		Electronic load sharing	
Control Panels	• EMCP II	• EMCP 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	- Manual Sump pump	
	• Fumes disposal		
Mounting	Formed steel base	Skid base	
· ·	• 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	
General		Battery disconnect switch Enclosures - sound attenuated, weather protective	
General		Automatic transfer switches (ATS)	
		Floor standing circuit breakers	

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SPECIFICATIONS



CAT SR4B GENERATOR

Frame Size
ExcitationSelf Excited
Pitch0.8000
Number of poles
Number of bearingsSingle Bearing
Insulation .UL 1446 Recognized Class H with tropicalization and
antiabrasion
IP RatingDrip Proof IP22
Alignment
Overspeed capability - % of rated
Wave formLess than 5% deviation
Paralleling kit/Droop transformerStandard
Voltage regulator 3 Phase sensing with selectible volts/Hz
Voltage regulation Less than +/- 1/2% (steady state)
Less than +/- 1% (no load to full load)
Telephone Influence FactorLess than 50



CAT DIESEL ENGINE

3412C TA V-12, 4-stroke-cycle watercooled diesel				
Bore - mm				
Stroke - mm				
Displacement - L				
Compression Ratio14.5 TO 1				
AspirationTA				
Fuel systemMechanical pump and line				
Governor type				

CAT CONTROL PANELS

- 24 Volt CD 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
- Shutdowns 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 - — 1800 rpm/60 Hz/480 Volts	PRIMI	PRIME DM0633	
Package Performance Power rating	725 ekW		
Power rating @ 0.8 pf	906.25 kVA		
Fuel Consumption			
100% load with fan	198.8 L/hr	52.5 Gal/hr	
75% load with fan	150.6 L/hr	39.8 Gal/hr	
50% load with fan	106.5 L/hr	28.1 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 arrangement)	847 m3/min	29,912 cfm	
Engine coolant capacity	59.0 L	15.6 Gal	
Exhaust System			
Combustion air inlet flow rate	63.0 m3/min	2,224.8 cfm	
Exhaust stack gas temperature	511.8 Deg C	953 Deg F	
Exhaust gas flow rate	175.2 m3/min	6,187.1 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)	457 kW	25,990 Btu/min	
Heat rejection to exhaust (total)	764 kW	43,449 Btu/min	
Heat rejection to atmosphere from engine	108 kW	6,142 Btu/min	
Heat rejection to atmosphere from generator	33.3 kW	1,893.8 Btu/min	
Alternator**			
Motor starting capability @ 30% voltage dip	2407 skVA		
Frame	597		
Temperature Rise	105 Deg C		
Lube System			
Lube oil refill volume with filter change for	60.0 L	15.9 Gal	
standard sump			
Ambient canability at 200 m (660 ft) above sea level. For ambient	aanabilitu at atbar altitudaa	aanault varu Cataunillau	

^{*}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.



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

Prime - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514 available on request. Prime power ambients shown indicate ambient at 100 percent load which results in a coolant top tank temperature just below the alarm 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	1741.6 mm	68.57 in		
Height	1986.7 mm	78.22 in		
Weight	7103 kg	15,659 lb		

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #1540166).



TMI Reference No.: DM0633 www.CAT-ElectricPower.com

PL Reference No.: 412DE72

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LEHE2366 26 February 2002 28117 Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication.