

Shown with
Optional
Equipment

STANDBY 250 kW PRIME 225 kW

60 Hz

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

FEATURES

COMPLETE, READY-TO-RUN SYSTEM

- Full-featured system includes:
 - integral fuel tank base
 - exhaust muffler and flex
 - charging alternator
 - batteries
 - battery rack and cables
 - main line circuit breaker
- Fully operable upon delivery, just add fuel and power cables

FULL RANGE OF ATTACHMENTS

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

ENCLOSURES (Optional)

- Weather protective and sound attenuated

SINGLE-SOURCE SUPPLIER

- Complete systems designed and built at Caterpillar ISO 9001 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



CAT® 3306 ATAAC 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



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:
 - Electromechanical panel provides analog monitoring and metering with basic protection
 - EMCP II provides digital monitoring, metering, and protection
 - EMCP II+ provides EMCP II features along with full-featured power metering and protective relaying
 - Switchgear conversion provides easy interface for remote switchgear

S T A N D B Y 2 5 0 e k W
P R I M E 2 2 5 e k W
6 0 H z



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 Air inlet shutoff
Cooling	Radiator with guard Coolant drain line with valve Fan and belt guards Caterpillar Extended Life Coolant	Radiator duct flange Jacket water heater with shutoff valves Low coolant level alarm and shutdown Heat exchanger and expansion tank
Exhaust	Stainless steel exhaust flex with mating weld flange 10 dBA muffler	25 dBA muffler 35 dBA muffler Elbow kit, through-wall installation kit Manifold and turbocharger guards
Fuel	Primary fuel filter Secondary fuel filter Fuel priming pump Fuel pressure gauge Flexible fuel lines	Water separator Manual transfer pump (3) Automatic transfer systems to choose from Low fuel level alarm and shutdown
Generator	Self excited class H insulation class F temperature rise [130° C standby/105° C prime] Circuit breaker, IEC compliant 3-pole with shunt trip 3-phase sensing VR3 voltage regulator	Permanent magnet excitation 2:1 Volts/Hz AVR Digital Voltage Regulator Digital Voltage Regulator with KVAR/PF control Space heater Reactive droop kit Oversize and premium generators Circuit breaker, IEC compliant, 4-pole with shunt trip
Governor	Hydra-mechanical	Isochronous (electronic) Electronic load sharing Governor control motor
Control Panels	EMCP II	Electromechanical auto start/stop panel EMCP II+ Switchgear conversion Local alarm and remote annunciator modules
Lube	Lubricating oil and filter Oil drain line with valves Fumes disposal	Manual sump pump
Mounting	Formed steel base with integral fuel tank (8 hour capacity — minimum) Linear vibration isolators between base and engine-generator	Wide base with integral fuel tank Extended capacity fuel tank base Skid base
Starting/Charging	45 amp charging alternator Energized To Run (ETR) fuel shutoff solenoid 24 Volt starting motor Batteries with rack and cables	Integral 5 amp battery charger Oversize batteries Ether starting aid Battery disconnect switch
Other		Enclosures — sound attenuated, weather protective Automatic transfer switches Special testing EU Certificate of Conformance (CE)

SPECIFICATIONS



CAT SR4B GENERATOR

Frame size	446
Type	Self excited, static regulated, brushless
Construction	Single bearing, close coupled
Three phase	12 lead reconnectable
Insulation	Class H with tropicalization and antiabrasion
IP rating	Drip proof IP22
Alignment	Pilot shaft
Overspeed capability	
Prototype tested	150%
Production tested	125%
Wave form	Less than 5% deviation
Paralleling capability	With optional droop transformer
Voltage regulator	3-phase sensing with Volts-per-Hertz
Voltage regulation	Less than ± 1/2% (steady state) Less than ± 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 ENGINE

3306 ATAAC, I-6, 4-stroke-cycle watercooled diesel	
Bore — mm (in)	121 (4.75)
Stroke — mm (in)	152 (6.0)
Displacement — L (cu in)	10.4 (638)
Compression ratio	10.4:1
Aspiration	Turbocharged-Air-to-Air-Aftercooled
Fuel system	Mechanical pump
Governor type	Hydra-mechanical



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 250 ekW
PRIME 225 ekW
60 Hz



TECHNICAL DATA

Generator Set — 1800 rpm/60 Hz/480 Volt		Standby DM3382-02		Prime DM3383-02	
Package Performance					
Power rating	ekW	250		225	
Power rating @ 0.8 PF	kVA	313		281	
Fuel Consumption					
100% load with fan	L/hr Gal/hr	76	20	67	18
75% load with fan	L/hr Gal/hr	54	14	49	13
50% load with fan	L/hr Gal/hr	37	10	34	9
Cooling System					
Ambient air temperature	Deg C Deg F	50	122	50	122
Air flow restriction (system)	kPa in water	0.12	0.5	0.12	0.5
Air flow (maximum @ rated speed for standard radiator arrangement)	m ³ /min cfm	446	15,738	446	15,738
Engine coolant capacity with radiator	L Gal	55	15	55	15
Engine coolant capacity without radiator	L Gal	16	4	16	4
Exhaust System					
Combustion air inlet flow rate	m ³ /min cfm	24	829	22	776
Exhaust stack gas temperature	Deg C Deg F	549	1020	522	971
Exhaust gas flow rate	m ³ /min cfm	68	2382	61	2160
Exhaust flange size (internal diameter)	mm in	152	6	152	6
Exhaust system backpressure (maximum allowable)	kPa in water	6.7	27	6.7	27
Heat Rejection					
Heat rejection to coolant (total)	kW Btu/min	110.0	6255	101.0	5744
Heat rejection to exhaust (total)	kW Btu/min	305.0	17,345	269.0	15,297
Heat rejection to atmosphere from engine	kW Btu/min	50.0	2843	41.2	2343
Heat rejection to atmosphere from generator	kW Btu/min	22.3	1268	19.2	1092
Alternator					
Motor starting capability @ 30% voltage dip	kVA	621		621	
Frame		446		446	
Temperature rise	Deg C	130		105	
Lube System					
Lube oil refill volume with filter change for standard sump	L Qts	39	41	39	41

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 MG1-22, 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.

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.

Ratings are based on SAE J1349 standard conditions.

These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

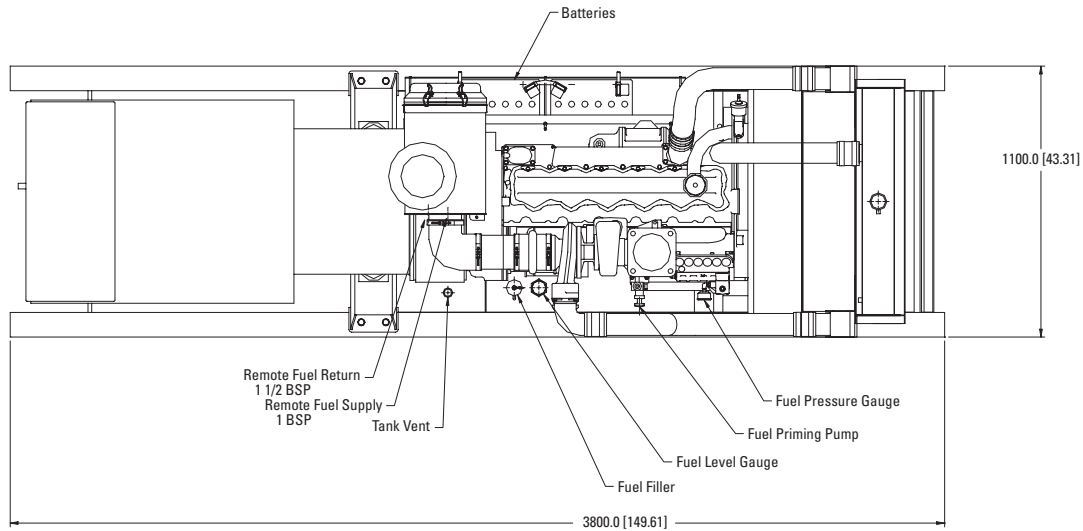
Fuel rates are based on fuel oil of 35° API (@ 16° C (60° F)) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

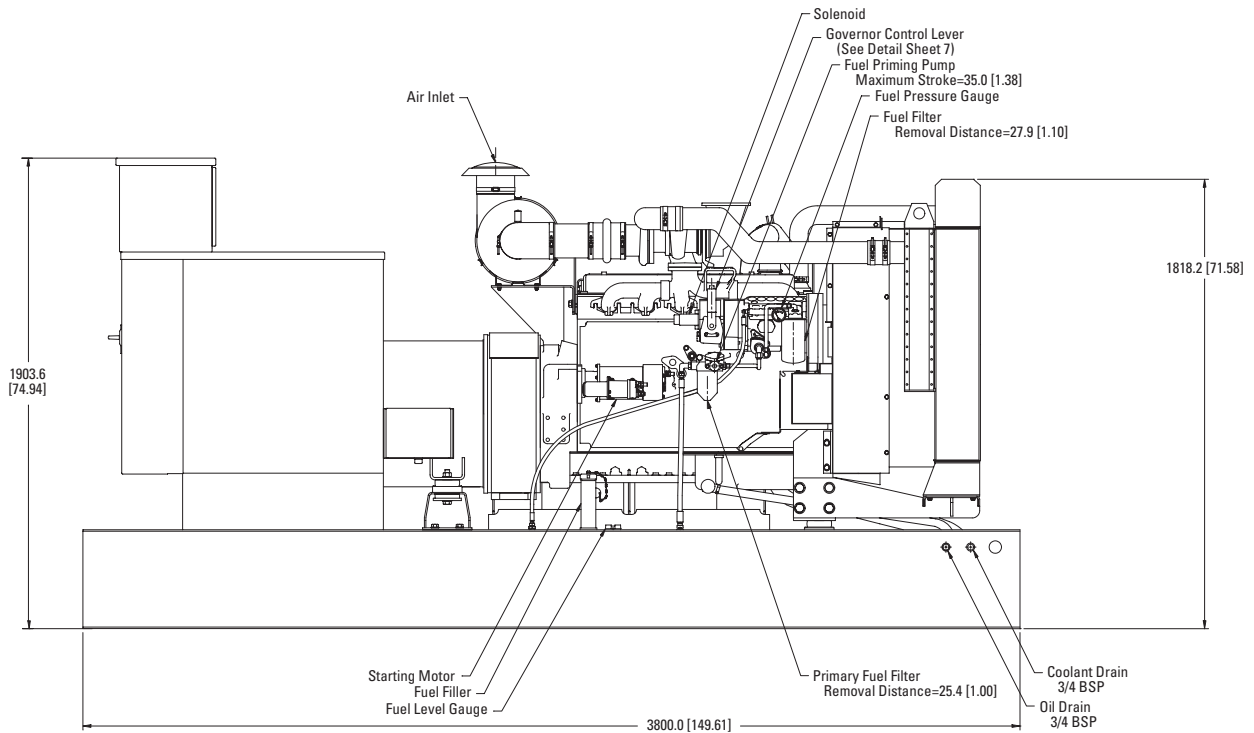
STANDBY 250 kW
 PRIME 225 kW
 60 Hz



STANDBY/PRIME POWER GENERATOR SET PACKAGE — TOP VIEW



STANDBY/PRIME POWER GENERATOR SET PACKAGE — SIDE VIEW



Package Dimensions		
Length	3800.0 mm	149.61 in
Width	1100.0 mm	43.31 in
Radiator Height	1818.2 mm	71.58 in
Control Panel Height	1903.6 mm	74.94 in
Shipping Weight	3165 kg	6977 lb

Note: General configuration not to be used for installation. See general dimension drawings for detail (Drawing #144-0257).



www.CAT-ElectricPower.com

TMI Reference No.: DM3382-02, DM3383-02

European sourced

LEHX9416 (06-00)
 Replaces LEHX7038-02 and LEHX7036-02

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