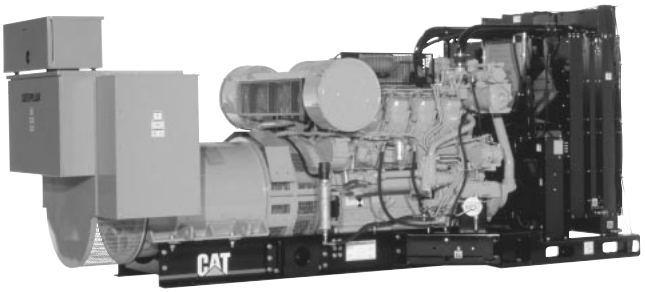


Shown with
Optional Equipment

STANDBY 1000 ekW

60 Hz

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

FEATURES

PERFORMANCE STRATEGY OPTIONS

- Low emission and low BSFC (brake specific fuel consumption) versions available

~~UL 2200~~

- ~~UL 2200 Listed configuration available~~

FULL RANGE OF ATTACHMENTS

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

SINGLE-SOURCE SUPPLIER

- Complete systems designed 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•S℠) program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT® 3508B DIESEL ENGINE FAMILY

- 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
- Single point access to accessory connections

CAT CONTROL PANELS

- Controls, designed to meet individual customer needs:
  EMCP II+ provides full-featured power metering and protective relaying
- UL 508A Listed

c UL us LISTED

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT
(Optional equipment listed may not be available on all packages)

System	Standard	Optional
Air Inlet	Regular-duty single element canister type air cleaner with service indicator	
Cooling	Jacket water pump Aftercooler water pump* Radiator sized for 43° C/110° F ambient Radiator fan and drive with guards Coolant drain line with valve Coolant level sensor Low coolant level alarm and shutdown High coolant temperature alarm and shutdown Caterpillar extended life coolant****	
Exhaust	Dry exhaust manifold Flange faced outlet(s)	
Fuel	Secondary fuel filters Fuel cooler Fuel priming pump Flexible fuel lines	
Generator	3 phase, brushless, statically regulated Permanent magnet exciter Digital Voltage Regulator — 3 phase sensing Class H insulation system Class F temperature rise Bus bar connection Winding temperature detectors Anti-condensation space heaters	Circuit breakers with shunt trip and auxiliary contacts, 3 pole UL 489 Listed
Governor	Electronic isochronous control	
Control Panels and Instrumentation	EMCP II + (generator mounted, rear facing)	Customer Interface Module Local alarm modules Engine failure relay Remote annunciator modules
Lube	Lubricating oil Gear type lube oil pump Integral lube oil cooler Oil filter, filler and dipstick Oil drain line and valve Fumes disposal	
Mounting	330 mm/13 in structural steel rails Spring-type anti-vibration mounts (shipped loose)	
Starting/ Charging	24 volt electric starting motor(s) 45 amp charging alternator Battery with rack and cables Battery disconnect switch	Oversized batteries Battery charger Jacket water coolant heater
Other	RH service	

*3500 B series only
**Standard on EPA Certified packages
***Not available on 3500 B series
****Not included with radiator removal, shipped loose radiator, or expansion tank
*****Standard and optional equipment may vary for UL 2200 Listed packages

TECHNICAL DATA

		Standby			
Generator Set — 1800 rpm/60 Hz/480 Volt		**DM2993-01**	**DM2995-01**	**DM2992-01**	**DM2994-01**
Package Performance					
Power rating @ 0.8 PF	ekW	1000	1000	1000	1000
	kVA	1250	1250	1250	1250
Performance Strategy		**Low Emissions**		**Low BSFC**	
Coolant to aftercooler temperature (maximum)*	Deg C	60	90	60	90
Fuel Consumption					
100% load with fan	L/hr	283.3	283.2	276.6	277.8
	Gal/hr	74.8	74.8	73.1	73.4
75% load with fan	L/hr	213.7	213.7	207.3	210.0
	Gal/hr	56.5	56.5	54.8	55.5
50% load with fan	L/hr	148.0	149.2	143.5	146.0
	Gal/hr	39.1	39.4	37.9	38.6
Cooling System					
Ambient air temperature	Deg C	43	43	43	43
	Deg F	110	110	110	110
Air flow restriction (system)	kPa	0.12	0.12	0.12	0.12
	in water	0.5	0.5	0.5	0.5
Engine coolant capacity without radiator	L	102.7	102.7	102.7	102.7
	Gal	27.1	27.1	27.1	27.1
Exhaust System					
Combustion air inlet flow rate	m^3/min	92.8	89.3	91.4	88.3
	cfm	3277	3154	3228	3118
Exhaust stack gas temperature	Deg C	447	448	431	436
	Deg F	837	838	809	817
Exhaust gas flow rate	m^3/min	227.5	221.1	219	215.2
	cfm	8034	7808	7734	7600
Exhaust flange size (internal diameter)	mm	203.0	203.0	203.0	203.0
(qty. of 1)	in	8.0	8.0	8.0	8.0
Exhaust system backpressure	kPa	6.7	6.7	6.7	6.7
(maximum allowable)	in water	27.0	27.0	27.0	27.0
Heat Rejection					
Heat rejection to coolant (total)	kW	482	511	476	506
	Btu/min	27,411	29,061	27,070	28,776
Heat rejection to aftercooler	kW	282	257	275	250
	Btu/min	16,037	14,616	15,639	14,217
Heat rejection to exhaust (total)	kW	1026	1019	985	987
	Btu/min	58,348	57,950	56,017	56,131
Heat rejection to atmosphere from engine	kW	110	122	105	118
	Btu/min	6256	6938	5971	6711
Heat rejection to atmosphere from generator	kW	58.40	58.40	58.40	58.40
	Btu/min	3322	3322	3322	3322
Alternator**					
Motor starting capability @ 30% voltage dip	kVA	2050	2050	2050	2050
Frame		692	692	692	692
Temperature rise	Deg C	130	130	130	130
Lube System					
Refill volume with filter change	L	219.6	219.6	219.6	219.6
for standard sump	Qts	232	232	232	232
Emissions***					
NOx	g/bhp-hr	9.48	11.06	11.39	12.81
	mg/N•m^3 @ 5% O_2	4909	5716	6041	6754
CO	g/bhp-hr	0.45	0.93	0.58	0.99
	mg/N•m^3 @ 5% O_2	231	480	307	522
HC	g/bhp-hr	0.2	0.18	0.23	0.21
	mg/N•m^3 @ 5% O_2	102	94	123	112
PM	g/bhp-hr	0.12	0.105	0.11	0.087
	mg/N•m^3 @ 5% O_2				

*Consult Caterpillar dealer for performance data and configuration details with 30° C aftercooler temperature. (Reference DM2991 for low emissions and DM2990 for low BSFC.)

**UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.

***Emissions data measurement is consistent with those described in EPA CFR40 Part 86, Subpart D and ISO8178-1 for measuring HC, CO, PM, NOx.

SPECIFICATIONS

CAT SR4B GENERATOR

Type ..... Salient pole, brushless, permanent magnet excited, static regulated
Connection ..... Three phase wye
IP rating ..... Drip proof IP22
Insulation:
— Standard package ..... Class H windings with tropicalization and antiabrasion treatment
— UL 2200 package ..... UL 1446 Recognized Class F
Overspeed capability
Prototype tested ..... 150% of rated
Production tested ..... 125% of rated
Wave form ..... < 5% deviation
Harmonic distortion ..... < 5% THD
Telephone influence factor ..... < 50
Voltage regulator ..... Digital Voltage Regulator (DVR) with 3 phase sensing, UL 508A Listed
Voltage regulation ..... < ± 1/2% (steady state) < ± 1% (no load to full load at steady state conditions)
Voltage gain ..... Adjustable to compensate for line loss
Paralleling capability ..... Standard

CAT ENGINE

3508B, 4-stroke-cycle watercooled diesel
Bore — mm (in) 170 (6.7)
Stroke — mm (in) 190 (7.5)
Displacement — L (cu in) 34.5 (2105)
Compression ratio 14:1
Aspiration ..... Turbocharged and Aftercooled
Fuel system ..... Direct unit injection
Governor type ..... Caterpillar ADEM control system

CAT EMCP II+ CONTROL PANEL

24 Volt DC Control
NEMA 1, IEP23 dustproof enclosure
Lockable hinged door
Generator terminal box mounted
Single location customer connection
UL 508A Listed
Panel illuminating lights
Auto start/stop control
Voltage adjust potentiometer
True RMS AC metering
Digital indications for:
- Rpm
- Operating hours
- Oil pressure
- Coolant temperature
- DC volts
- L-L volts, L-N volts, Phase amps, Hz
- KW, kVA, kVAR, kWhr, %kW, PF

Shutdowns with indicating lights for:
- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency stop
- Failure to start (overcrank)

Programmable protective relaying functions
- Under and over voltage
- Under and over frequency
- Reverse power
- Over current (phase and total)
- KW level

3 spare indicator LED's (programmable)
3 spare alarm/shutdown inputs

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.

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.

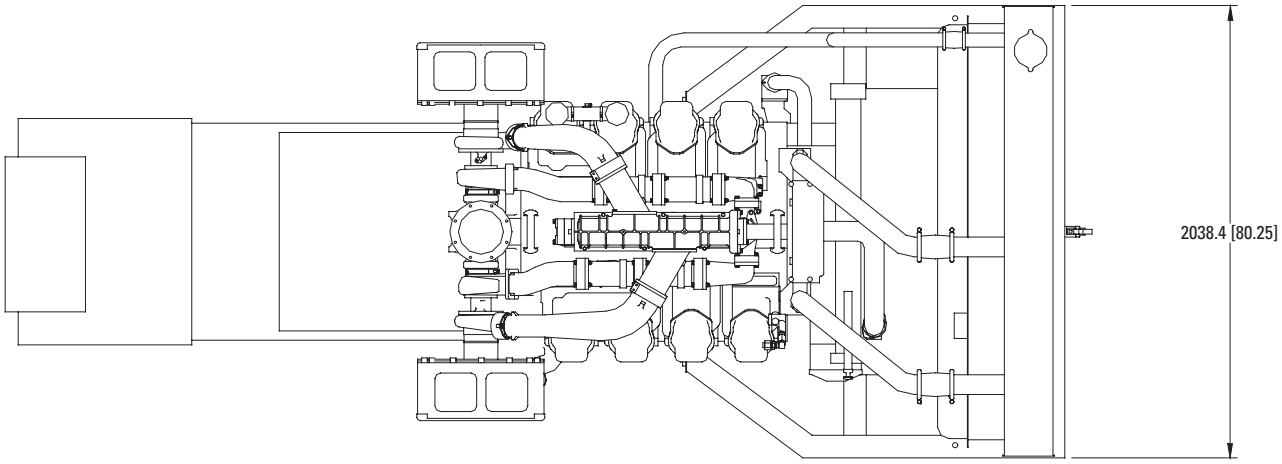
Continuous — Output available without varying load for an unlimited time. Continuous power in accordance with ISO8528, ISO3046/1, AS2789, DIN6271, and BS5514.

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

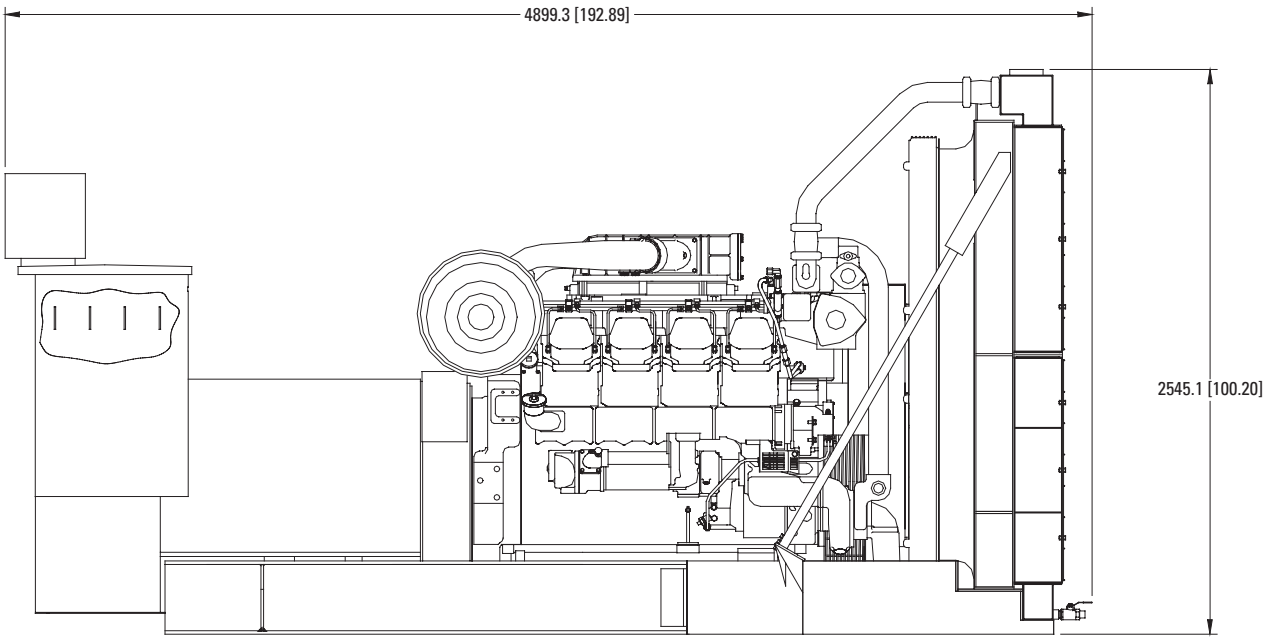
Fuel rates are based on fuel oil of 35° API (16° C or 60° F) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

STANDBY/PRIME POWER GENERATOR SET PACKAGE — TOP VIEW



STANDBY/PRIME POWER GENERATOR SET PACKAGE — SIDE VIEW



Package Dimensions		
Length	4899.3 mm	192.89 in
Width	2038.4 mm	80.25 in
Height	2545.1 mm	100.20 in

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

Estimated engine only weight is □ 27,000 lbs. Total weight with □ enclosure is 44,800 lbs.

TMI Reference No.: DM2992-01, DM2993-01, DM2994-01, DM2995-01, DM2998-01, DM2999-01, DM3000-01, DM3001-01

U.S. sourced

LEHX0766 (02-01)

www.CAT-ElectricPower.com

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