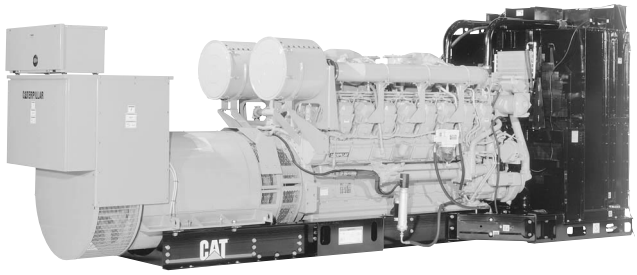

Image shown may not reflect actual package

STANDBY 2000 ekW
PRIME 1825 ekW

60 Hz

12,470, 13,200, 13,800 Volts

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

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® 3516B 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 HV 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
- Remote control and monitor capability options
- Floor standing switchgear available

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT FOR HIGH VOLTAGE PACKAGES
(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	Dual element and heavy duty air cleaners Air inlet adapters Air inlet shutoffs
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***	50° C/125° F ambient capability radiators Two circuit radiators (jacket water and aftercooler water)* Folded core radiators for standby applications*** Radiator removal Expansion tank with inlet/outlet connections Heat exchangers Radiator duct flange Fan Pulleys (various fan drive ratios)
Exhaust	Dry exhaust manifold Flange faced outlet(s)	Stainless steel exhaust flex Mufflers Elbows, flanges, expanders and Y adapters
Fuel	Secondary fuel filters Fuel cooler Fuel priming pump Flexible fuel lines	Primary fuel filter Primary fuel filter with water separator Duplex fuel filter
Generator	Caterpillar SR4B HV	6300 V, 6600 V and 6900 V generators Oversized generators LH extension box for cable entry Top cable entry conversion Air inlet filters Insulated lug landings for 6 leads 2 V/hz response voltage regulator KCR-760 Digital Voltage Regulator VAR/power factor controller Auto/manual voltage control Motor operated potentiometer (voltage adjust) Thermostat for space heater control Regulator RFI suppression to MIL std 461 C Diode fault detector
Governor	Electronic isochronous control	Load share module* or load share governor**
Control Panels and Instrumentation	EMCP II + (wall mounted, shipped loose)	Customer Interface Module Customer Communications Module Synchronizing Module Local alarm modules Programmable relay control module* Relay driver module Engine failure relay Auto starting aid & switch Instrument panel, RH, 16 hole** Remote annunciator modules Pyrometer and thermocouples (exhaust)
Lube	Lubricating oil Gear type lube oil pump Integral lube oil cooler Oil filter, filler and dipstick Oil drain line and valve Fumes disposal	Electric prelube pump Air prelube pump Sump pump with manual prelube Deep sump oil pan Duplex oil filter (RH service only) Oil level regulator
Mounting	330 mm/13 in structural steel rails Spring-type anti-vibration mounts (shipped loose)	Isolator removal
Starting/ Charging	24 volt electric starting motor(s) 45 amp charging alternator Battery with rack and cables Battery disconnect switch	Dual and heavy duty electric starting motors Oversized batteries Battery charger Ether starting aid Jacket water coolant heater Air starting motor with control and silencer
Other	RH service	Switchgear (floor standing) Automatic transfer switches Enclosures Engine barring device (manual) EU Certification CSA Certification

*3500 B series only
**Not available on 3500 B series
***Not included with radiator removal, shipped loose radiator, or expansion tank

TECHNICAL DATA

		Standby			
Generator Set — 1800 rpm/60 Hz/13,200 Volt		**DM4702**	**DM4703**	**DM4693**	**DM4694**
Package Performance					
Power rating @ 0.8 PF	ekW	2000	2000	2000	2000
	kVA	2500	2500	2500	2500
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	558.5	545.0	518.3	530.7
	Gal/hr	147.6	144.0	136.9	140.2
75% load with fan	L/hr	411.8	408.4	390.2	392.6
	Gal/hr	108.8	107.9	103.1	103.7
50% load with fan	L/hr	283.6	282.2	272.0	269.2
	Gal/hr	74.9	74.6	71.9	71.1
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	233.0	233.0	233.0	233.0
	Gal	61.6	61.6	61.6	61.6
Exhaust System					
Combustion air inlet flow rate	m^3/min	175.6	168.1	167.2	164.3
	cfm	6200	5936	5904	5801
Exhaust stack gas temperature	Deg C	523	526	476	514
	Deg F	973	978	890	958
Exhaust gas flow rate	m^3/min	488.8	470.5	438.1	453.9
	cfm	17,260	16,613	15,469	16,027
Exhaust flange size (internal diameter)	mm	203.0	203.0	203.0	203.0
(qty. of 2)	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	27	27	27
Heat Rejection					
Heat rejection to coolant (total)	kW	811	834	768	818
	Btu/min	46,121	47,429	43,676	46,520
Heat rejection to aftercooler	kW	552	449	481	414
	Btu/min	31,392	25,535	27,354	23,544
Heat rejection to exhaust (total)	kW	2255	2186	1949	2088
	Btu/min	128,242	124,318	110,839	118,744
Heat rejection to atmosphere from engine	kW	162	168	145	160
	Btu/min	9213	9554	8303	9099
Heat rejection to atmosphere from generator	kW	78.94	78.94	78.94	78.94
	Btu/min	4490	4490	4490	4490
Alternator					
Motor starting capability @ 30% voltage dip	kVA	4006	4006	4006	4006
Frame		2470	2470	2470	2470
Temperature rise	Deg C	130	130	130	130
Lube System					
Refill volume with filter change	L	401.3	401.3	401.3	401.3
for standard sump	Qts	424	424	424	424
Emissions**					
NOx	g/bhp-hr	6.56	8.36	10.63	10.72
	mg/N•m^3 @ 5% O_2	2941	3836	5137	5052
CO	g/bhp-hr	0.65	0.83	0.53	0.82
	mg/N•m^3 @ 5% O_2	293	383	258	386
HC	g/bhp-hr	0.17	0.15	0.23	0.14
	mg/N•m^3 @ 5% O_2	77	70	111	66
PM	g/bhp-hr	0.143	0.119	0.103	0.101
	mg/N•m^3 @ 5% O_2	64	55	50	47

*Consult Caterpillar dealer for performance data and configuration details with 30° C aftercooler temperature. (Reference DM4701 for low emissions and DM4692 for low BSFC.)

**Emissions data measurement is consistent with those described in EPA CFR40 Part 89, Subpart D and ISO8178-1 for measuring HC, CO, PM, NOx.

TECHNICAL DATA

		Prime			
Generator Set — 1800 rpm/60 Hz/13,200 Volt		**DM4705**	**DM4706**	**DM4696**	**DM4697**
Package Performance					
Power rating @ 0.8 PF	ekW	1825	1825	1825	1825
	kVA	2281	2281	2281	2281
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	505.4	496.6	472.2	479.9
	Gal/hr	133.5	131.2	124.7	126.8
75% load with fan	L/hr	375.7	373.6	356.6	358.6
	Gal/hr	99.2	98.7	94.2	94.7
50% load with fan	L/hr	262.0	260.1	252.1	248.2
	Gal/hr	69.2	68.7	66.6	65.6
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	233.0	233.0	233.0	233.0
	Gal	61.6	61.6	61.6	61.6
Exhaust System					
Combustion air inlet flow rate	m^3/min	169.7	161.6	159.8	156.7
	cfm	5992	5706	5643	5533
Exhaust stack gas temperature	Deg C	487	499	455	486
	Deg F	909	930	852	907
Exhaust gas flow rate	m^3/min	450.3	436.7	406.3	416.4
	cfm	15,900	15,420	14,346	14,703
Exhaust flange size (internal diameter)	mm	203.0	203.0	203.0	203.0
(qty. of 2)	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	27	27	27
Heat Rejection					
Heat rejection to coolant (total)	kW	754	779	719	762
	Btu/min	42,880	44,302	40,889	43,335
Heat rejection to aftercooler	kW	487	392	417	351
	Btu/min	27,696	22,293	23,715	19,961
Heat rejection to exhaust (total)	kW	2007	1973	1777	1868
	Btu/min	114,138	112,204	101,058	106,233
Heat rejection to atmosphere from engine	kW	147	155	136	148
	Btu/min	8360	8815	7734	8417
Heat rejection to atmosphere from generator	kW	71.95	71.95	71.95	71.95
	Btu/min	4263	4263	4263	4263
Alternator					
Motor starting capability @ 30% voltage dip	kVA	4006	4006	4006	4006
Frame		2470	2470	2470	2470
Temperature rise	Deg C	105	105	105	105
Lube System					
Refill volume with filter change	L	401.3	401.3	401.3	401.3
for standard sump	Qts	424	424	424	424
Emissions**					
NOx	g/bhp-hr	6.55	8.34	10.69	10.71
	mg/N•m^3 @ 5% O_2	2967	3841	5181	5104
CO	g/bhp-hr	0.54	0.66	0.50	0.64
	mg/N•m^3 @ 5% O_2	244	304	244	304
HC	g/bhp-hr	0.20	0.18	0.20	0.17
	mg/N•m^3 @ 5% O_2	90	84	97	80
PM	g/bhp-hr	0.151	0.124	0.103	0.102
	mg/N•m^3 @ 5% O_2	69	57	50	49

*Consult Caterpillar dealer for performance data and configuration details with 30° C aftercooler temperature. (Reference DM4704 for low emissions and DM4695 for low BSFC.)

**Emissions data measurement is consistent with those described in EPA CFR40 Part 89, Subpart D and ISO8178-1 for measuring HC, CO, PM, NOx.

SPECIFICATIONS

CAT SR4B HV GENERATOR

Type. . . . . Salient pole, revolving field, brushless, permanent magnet excited
Drive configuration . . . . . Two bearing, close coupled
Connection . . . . . Three phase wye with insulated stand-off copper lug landings
IP rating . . . . . Drip proof IP23
Insulation . . . . . Class F Vacuum Pressure Impregnated (VPI) on stator, rotor, exciter and leads
Stator coils . . . . . Form wound
Overspeed capability . . . . . 125% of rated
Wave form. . . . . < 5% deviation
Harmonic distortion. . . . . < 5% THD
Telephone influence factor . . . . . < 50
Stator temperature detectors. . . . . Two (2) 100 ohm platinum RTD's installed per phase
Voltage regulator . . . . . Solid state automatic voltage regulator KCR-760, 3 phase sensing with volts-per-hertz response
Voltage regulation . . . . . < ± 1/2% (steady state)
Paralleling capability . . . . . Regulator input for reactive droop or cross-current methods
Anti-condensation space heaters. . . . 120/240 V, 1 phase, 2 kW
Cable entry . . . . . RH bottom

CAT ENGINE

3516B, 4-stroke-cycle watercooled diesel
Bore — mm (in) 170 (6.7)
Stroke — mm (in) 190 (7.5)
Displacement — L (cu in). 69 (4210)
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 12, IEP44 dustproof enclosure
Lockable hinged door
Single location customer connection
Panel illuminating lights
Auto start/stop control
Voltage adjust potentiometer (shipped loose)
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)
- Low coolant level

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

Programmable kW level relay
3 spare indicator LED's (programmable)
4 spare alarm/shutdown inputs

*Shipped loose for wall mounting. 120 V secondary voltage sensing, 5 A secondary current sensing and wiring interconnect between generator set and EMCP II+ to be provided by others at installation (drawing provided).

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.

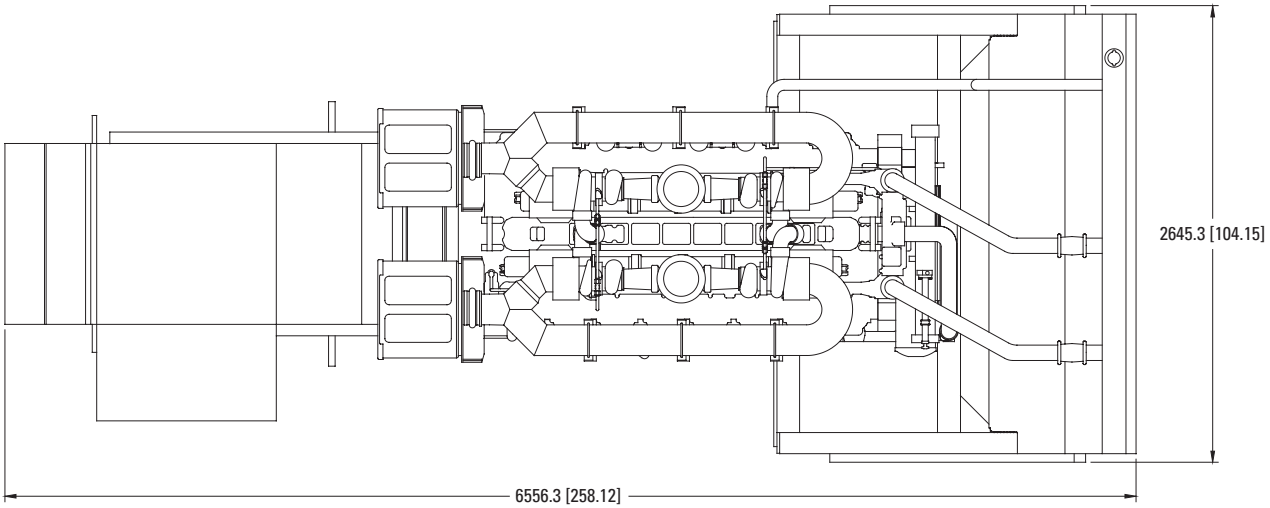
Fuel rates are based on fuel oil of 35° API (16° C or 60° F) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

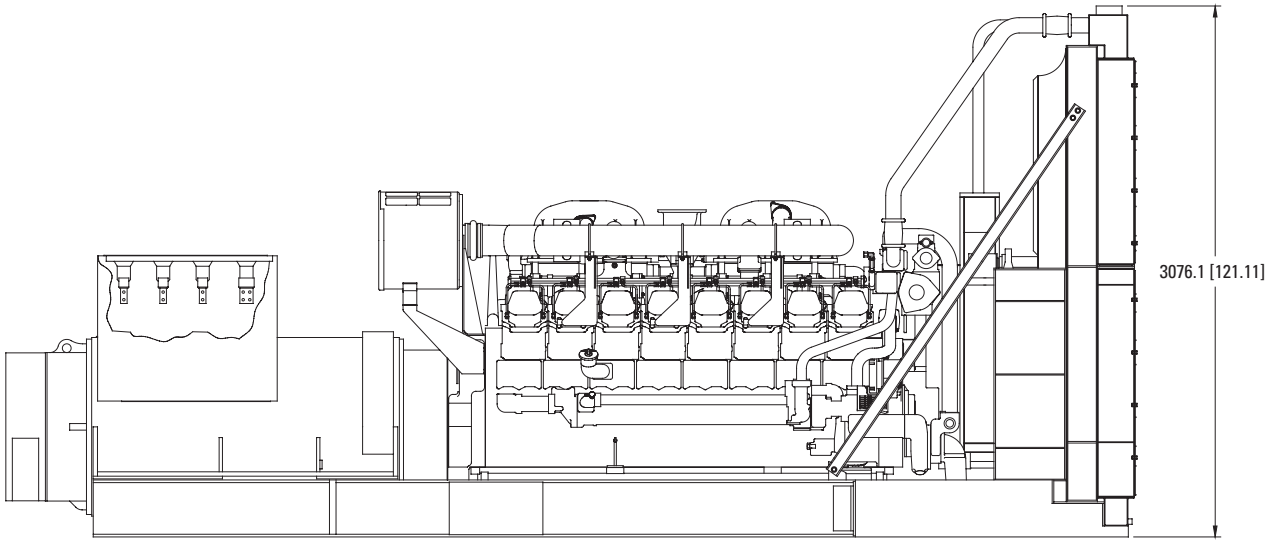
STANDBY 2000 ekW
PRIME 1825 ekW
60 Hz
12,470, 13,200, 13,800 Volts

CATERPILLAR®

STANDBY/PRIME POWER GENERATOR SET PACKAGE — TOP VIEW



STANDBY/PRIME POWER GENERATOR SET PACKAGE — SIDE VIEW



Package Dimensions		
Length	6556.3 mm	258.12 in
Width	2645.3 mm	104.15 in
Height	3076.1 mm	121.11 in

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

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CATERPILLAR FACILITIES ISO 9001 CERTIFIED

www.CAT-ElectricPower.com

TMI Reference No.: DM4692, DM4693, DM4694, DM4695, DM4696, DM4697, DM4701, DM4702, DM4703, DM4704, DM4705, DM4706

U.S. sourced

LEHE1387 (05-01)

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