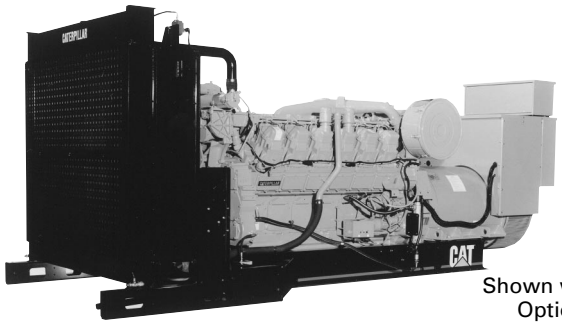
CATERPILLAR®

Generator Set

1625 kV.A
1500 rpm
50 Hz

Standby Power



Shown with Optional Equipment

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

FEATURES

■ **FULL RANGE OF ATTACHMENTS**
- Wide range of bolt-on system expansion attachments, factory designed and tested

■ **SINGLE-SOURCE SUPPLIER**
- Complete systems designed and built 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

■ **MEETS OR EXCEEDS INTERNATIONAL SPECIFICATIONS**: ABGSM TM3, AS 1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC 34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG1, VED0530, 89/392/EEC, 89/336/EEC

■ **CAT® 3512B 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.
- Switchgear conversion using Caterpillar electronic monitoring system provides state-of-the-art engine monitoring and protection while providing a simple interface to separate floorstanding switchgear.
- Microprocessor based Electronic Modular Control Panel (EMCP II and EMCP II+) use digital metering and true RMS monitoring to provide advanced monitoring, metering, control, and protective relaying capabilities. Fully compatible with Caterpillar annunciators, and remote communication and expansion modules.
- EMCP II+ paralleling panel provides fully automatic and manual permissive paralleling capability. Synchronizing and load sharing are added to EMCP II+ power metering and protective relaying to provide a state-of-the-art paralleling system which is self contained within the generator set.

CATERPILLAR FACILITIES ISO 9001 CERTIFIED

CE

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

SYSTEM	STANDARD	OPTIONAL
Air inlet	modular air cleaner, single element 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 low coolant level shutdown	radiator duct flange jacket water heater with isolation valves
Exhaust	stainless steel exhaust flex and ANSI weld flange engine exhaust guarding	industrial grade muffler and ANSI weld flanges residential muffler and ANSI weld flanges critical muffler and ANSI weld flanges muffler mounting kit, through-wall installation kit
Fuel	primary fuel filter secondary fuel filter fuel priming pump flexible fuel lines	fuel cooler water separator low fuel level alarm and shutdown
Generator	permanent magnet excitation Digital Voltage Regulator (D.V.R.) class F temperature rise 130° C (266° F) standby anti-condensation space heater stator temperature detectors (type-J thermocouples)	D.V.R. with KVAR/PF control bearing temperature detectors oversize and premium generators circuit breaker, IEC compliant 3-pole with shunt trip circuit breaker, IEC compliant, 4-pole with shunt trip
Governor	Caterpillar® ADEM control system	load sharing
Control panels	EMCP II	switchgear conversion EMCP II+ system expansion modules
Lube	lubricating oil oil drain line with valves fumes disposal	sump pump — manual sump pump and prelube — manual sump pump and prelube — 24VDC lube oil level regulation system lube oil high temperature shutdown
Mounting	13-in. structural steel rails spring-type anti-abrasion isolators	
Starting/ charging	45 amp charging alternator fuel shutoff solenoid 24 volt starting motor batteries with rack and cables battery disconnect	integral 5 amp battery charger oversize batteries ether starting aid heavy-duty starting system
Other		CE certification crankcase explosion relief valves

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TECHNICAL DATA

1625 kV•A/ 1300 kW Standby Power Generator Set – 1500 rpm/50 Hz

Package Performance		
Power rating @ 0.8 PF with fan	kV•A	1625
	kW	1300
Fuel Consumption		
100% Load with Fan	L/hr	321.2
75% Load with Fan	L/hr	240.4
Cooling System		
Ambient Air Temperature (Consult T.M.I.)		
Designed for operation up to	Deg C	43
Air Flow Restriction (After Radiator)	kPa	.19
Standard Radiator Arrangement Data		
Air Flow (Max @ Rated Speed)	m^3/min	1488
Engine Coolant Capacity with Radiator	L	439
Engine Coolant Capacity without Radiator	L	160
Exhaust System		
Combustion Air Inlet Flow Rate	m^3/min	96.4
Exhaust Gas Stack Temperature	Deg C	493
Exhaust Gas Flow Rate	m^3/min	261.1
Exhaust Flange Size — (Internal Diameter)	mm	203
System Backpressure (Max. Allowable)	kPa	6.7
Heat Rejection		
Heat Rejection to Coolant (Total)	kW	543
Heat Rejection to Exhaust (Total)	kW	1159
Heat Rejection to Atmosphere from Engine	kW	139
Heat Rejection to Atmosphere from Generator	kW	55

Deration: Generator set is designed to operate in ambient temperatures up to 43° C (109° F) and at higher altitudes. Please consult factory for available outputs.

CAT® 697 FRAME GENERATOR SPECIFICATIONS

Type . . . . . Permanent magnet excited, static regulated, brushless
Construction . . . . . Single bearing, close coupled
Three phase . . . . . 6 lead
Insulation . . . . . Class H with tropicalization and antiabrasion
Enclosure . . . . . Drip proof IP22
Alignment. . . . . Pilot shaft
Overspeed capability 150%
Wave form. . . . . Less than 5% deviation
Paralleling capability. . . . . Standard
Voltage regulator . . 3-phase sensing with D.V.R.
Voltage regulation . . Less than ±1/2% (steady state) Less than ± 1% (no load to full load)
Voltage gain . . . . . Adjustable to compensate for line loss
TIF . . . . . Less than 50
THD . . . . . Less than 5%

CAT® 3512B ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle Watercooled Diesel
Bore — mm (in) 170 (6.7)
Stroke — mm (in). 190 (7.5)
Displacement — L (cu in) 51.8 (3158)
Compression ratio 14:1
Aspiration . . . . . Turbocharged, Separate Circuit Aftercooled
Fuel System . . . . . Direct Unit Injection

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.

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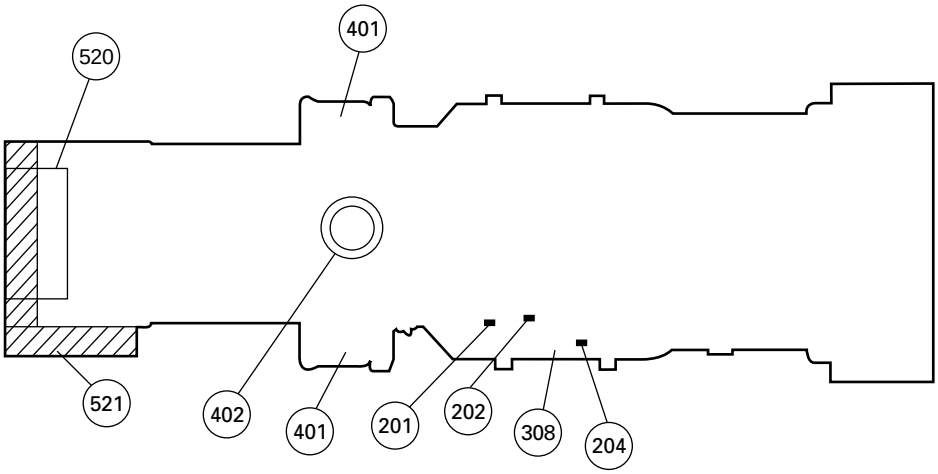
STANDBY POWER GENERATOR SET PACKAGE — TOP VIEW



201 Fuel Inlet	308 Oil Filter	520 Control and Power Panel
202 Excess Fuel Return	401 Air Cleaner	521 Conduit Entrance
204 Fuel Filter	402 Exhaust	

PACKAGE DIMENSIONS		
Length	mm (in)	228 (5786)
Width	mm (in)	2000 (79)
Height	mm (in)	2230 (88)
Shipping Weight	kg (lb)	11 550 (25 430)

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

RATING DEFINITIONS AND CONDITIONS

Standby — Output available with varying load for the duration of the interruption of the normal source power. Fuel stop power in accordance with 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.

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

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