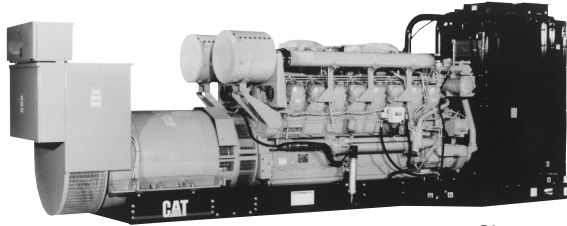


CATERPILLAR®

Generator Set

1750 kW
1800 rpm
60 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•SSM) 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® 3516 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.



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 266° F (130° C) 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	Woodward 2301A isochronous speed control governor	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

1750 kW GENERATOR SET



TECHNICAL DATA

1750 kW/2188 kV•A Standby Power Generator Set – 1800 rpm/60 Hz

Package Performance		
Power rating @ 0.8 PF with fan	kW kV•A	1750 2188
Fuel Consumption		
100% Load with Fan	gph	124.2
75% Load with Fan	gph	96.0
Cooling System		
Ambient Air Temperature (Consult T.M.I.)		
Designed for operation up to	Deg F	109.4
Air Flow Restriction (After Radiator)	in water	.76
Standard Radiator Arrangement Data		
Air Flow (Max @ Rated Speed)	cfm	69 280
Engine Coolant Capacity with Radiator	gal	—
Engine Coolant Capacity without Radiator	gal	61.6
Exhaust System		
Combustion Air Inlet Flow Rate	cfm	5501
Exhaust Gas Stack Temperature	Deg F	955
Exhaust Gas Flow Rate	cfm	15 116
Exhaust Flange Size — (Internal Diameter)	in	8
System Backpressure (Max. Allowable)	in water	27
Heat Rejection		
Heat Rejection to Coolant (Total)	BTU/min	58 462
Heat Rejection to Exhaust (Total)	BTU/min	111 465
Heat Rejection to Atmosphere from Engine	BTU/min	8076
Heat Rejection to Atmosphere from Generator	BTU/min	3527

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

CAT® 824 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 $\pm 1/2\%$ (steady state)
 Less than $\pm 1\%$ (no load to full load)
 Voltage gain Adjustable to compensate for line loss
 TIF Less than 50
 THD Less than 5%

CAT® 3516 ENGINE SPECIFICATIONS

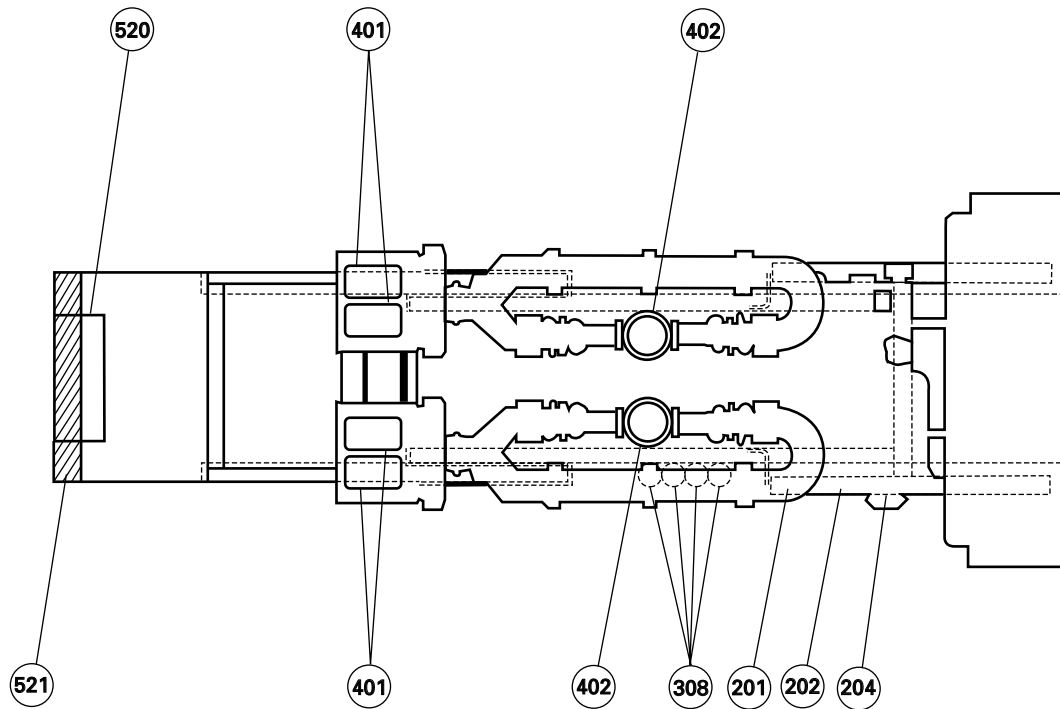
V-16, 4-Stroke-Cycle Watercooled Diesel
 Bore — in (mm) 6.7 (170)
 Stroke — in (mm)..... 7.5 (190)
 Displacement — cu in (L) 4210 (69)
 Compression ratio 13.5:1
 Aspiration Turbocharged-Jacket Water Aftercooled
 Fuel System Direct Unit Injection

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.

STANDBY POWER GENERATOR SET PACKAGE — TOP VIEW



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

PACKAGE DIMENSIONS		
Length	in (mm)	246 (6248)
Width	in (mm)	79 (2000)
Height	in (mm)	88 (2230)
Shipping Weight	lb (kg)	29 120 (13 220)

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 (60° F or 16° C) gravity having an LHV of 18 390 Btu/lb (42 780 kJ/kg) when used at 85° F (29° C) and weighing 7.001 lbs/U.S. gal. (838.9 g/liter).

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