



Gas Engine Generator Set

G3306

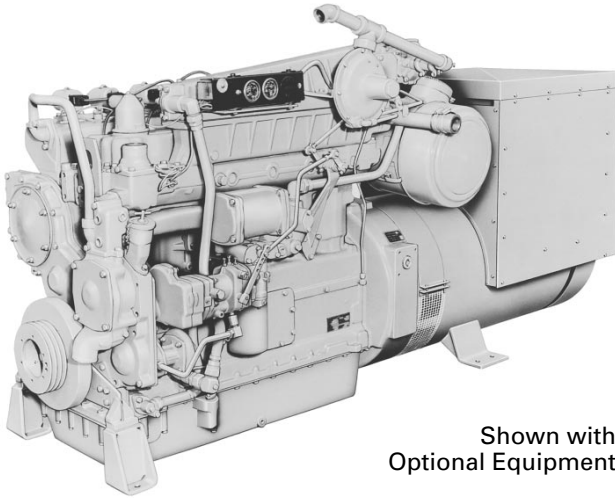
1800 rpm

85-150 kW 60 Hz

Continuous Power

CATERPILLAR® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle, Spark Ignited
 Bore — in (mm) 4.75 (121)
 Stroke — in (mm)..... 6.0 (152)
 Displacement — cu in (L)..... 638 (10.5)
 Compression ratio..... 10.3:1
 Aspiration Naturally Aspirated or Turbocharged-Aftercooled



Shown with Optional Equipment



FEATURES

■ CAT® GENERATOR SETS

Factory designed, certified prototype tested with torsional analysis. Production tested and delivered to you in a package that is ready to be connected to your fuel and power lines. EPG designer computer sizing available. Supported 100% by your Caterpillar dealer with warranty on parts and labor; extended warranty available in some areas. The generator set was designed and manufactured in an ISO 9001 compliant facility. Generator set and components meet or exceed the following: AS1359, AS2789, BS4999, DIN6271, DIN6280, IEC 34/1, ISO3046/1, NEMA MG1-22.

■ DIESEL STRENGTH BUILT IN

Blocks, crankshafts, liners, and connecting rods are common with Cat diesel engines. Gas engine pressures are 40%-50% lower, resulting in extra long life with the economy of the gaseous fuel.

■ CATERPILLAR® SR4 GENERATOR

Single bearing, wye connected, static regulated brushless excited generator designed to match the performance and output characteristics of the Caterpillar engine that drives it.

■ EXCLUSIVE CATERPILLAR VOLTAGE REGULATOR

Three-phase sensing and Volts per Hertz regulation with constant voltage in the normal operating range gives precise control and excellent load acceptance.

CATERPILLAR® SR4 GENERATOR

Type Static regulated brushless excited
 Construction Single bearing, close coupled,
 Three phase Wye connected
 Insulation Class F
 Enclosure Drip proof
 Alignment Pilot shaft
 Overspeed capability 125%
 Wave form Less than 5% deviation

Voltage regulator 3-phase sensing with Volts-per-Hertz response
 Voltage regulation Less than ± 1%
 Voltage gain Adjustable to compensate for engine speed droop and line loss
 TIF Less than 50
 THF Less than 3%

STANDARD EQUIPMENT

Engine

Air cleaner, dry normal duty with rain cap	Manifold, exhaust, watercooled
Breather, crankcase	Paint, Caterpillar yellow
Carburetor, natural gas (NA)	Protection devices, oil pressure and coolant temperature energized to shutoff
Cooler, lubricating oil, RH	Pumps, centrifugal, non-self-priming aftercooler water, gear driven (TA only)
Elbow, exhaust, dry	jacket water, gear driven
Filter, lubricating oil, RH	Regulator, gas pressure (TA)
Flywheel housing, SAE No. 1	SAE standard rotation
Governor, Woodward PSG	Service meter
Ignition system Altronic 5	Supports, engine
Instrument panel, LH shutdown contactors oil pressure and coolant pressure manual shutoff switch	Thermostats and housing
Lifting eyes	Vibration damper and guard

OPTIONAL EQUIPMENT

Engine

Cooling systems aftercooler groups expansion tanks heat exchangers radiators	Gauges and instrument panels
Exhaust systems	Generator arrangements
Fuel systems	Ignition system, Altronic 3, Power takeoffs
	Protection devices
	Starting systems

TECHNICAL DATA

G3306 Gas Engine Generator Set–1500 rpm		NA LCR	NA HCR	TA 130	TA 90
Electrical Output @ 0.8 pf without Fan	kW	85	100	135	150
Voltage		480	480	480	480
Compression Ratio		8:1	10.5:1	8:1	10.5:1
Minimum Gas Pressure Required	psi	1.5	1.5	12.0	12.0
Shipping Weight	lb	3285	3285	3375	3520
Overall Length	in	89.1	89.1	89.1	92.6
Overall Width	in	32.2	32.2	38.5	38.5
Fuel Consumption (100% load) with Fan	Btu/hp-hr	8400	7700	7888	7457
Fuel Consumption (75% load) with Fan	Btu/hp-hr	9100	8100	8490	8149
Air Inlet Flow Rate	scfm	187	198	339	352
Exhaust Gas Flow Rate @ Stack F	cfm	643	671	946	977
Heat Rejection to Jacket Water (total)	Btu/min	6877	6679	9668	9383
Heat Rejection to Exhaust (to 350° F)	Btu/min	3352	3453	4606	4720
Heat Rejection to Aftercooler	Btu/min	—	—	512	796
Heat Rejection to Atmosphere from Engine	Btu/min	613	643	1592	1365
Exhaust Gas Stack Temperature	Deg. F	1112	1080	1006	1001

90 refers to aftercooler water inlet temperature in °F (32° C).

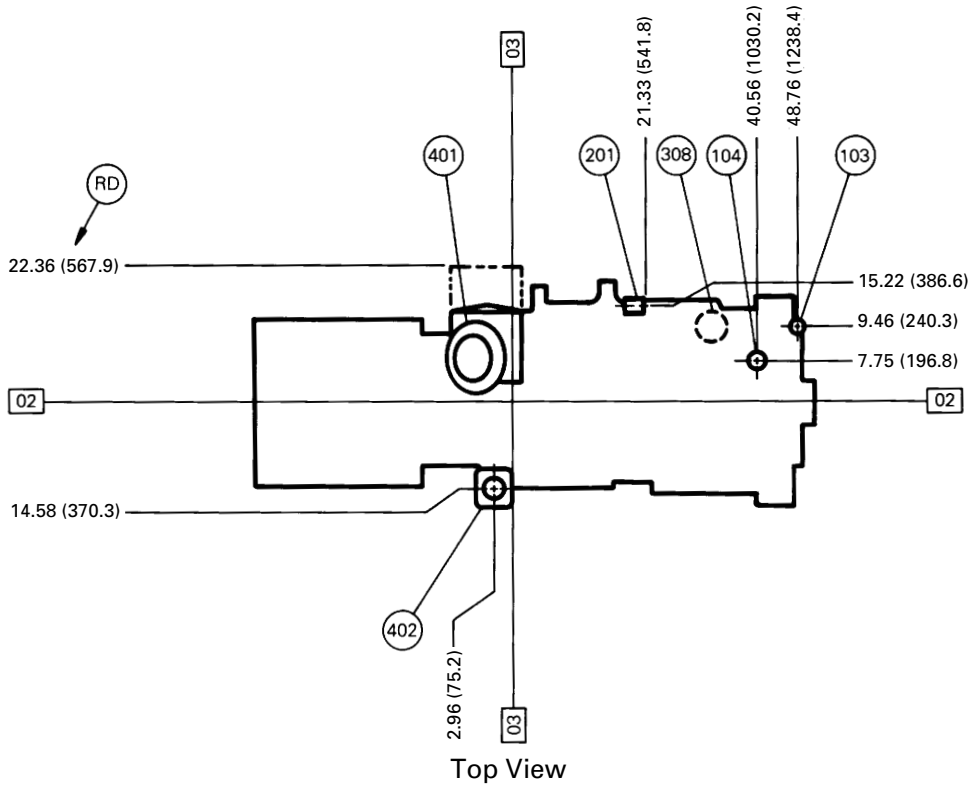
130 refers to aftercooler water inlet temperature in °F (54° C).

All data is based on standard conditions.

These ratings do not allow for overload capability.

Consult your Caterpillar dealer for standby and catalyst ratings.

CONTINUOUS GENERATOR SET PACKAGE
(Turbocharged-Aftercooled Configuration shown below)



- | | | |
|---|-------------------------|----------------------------|
| 02 Centerline of Engine | 104 Water Outlet | 401 Air Inlet |
| 03 Rear Face of Flywheel Housing | 201 Fuel Inlet | 402 Exhaust |
| 103 Water Inlet | 308 Oil Filter | RD Removal Distance |

Generator Set Height: TA – 1210 mm (47.7 in)
NA – 1269 mm (50.0 in)

See General Dimension Drawing 5N5560 for additional TA details.

Note: General Configuration not to be used for installation.

Dimensions are in in (mm).

RATING DEFINITIONS AND CONDITIONS

Ratings are based on SAE J1349 standard conditions of 29.61 in Hg (100 kPa) and 77° F (25° C). These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions of 29.61 in Hg (100 kPa) and 81° F (27° C); and API 7B-11C standard conditions of 29.38 in Hg (99 kPa) and 85° F (29° C) also apply.

Ratings are based on dry natural gas having a low heat value of 905 btu/ft³ (35.22 MJ/m³). Variations in altitude, temperature, and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-aftercooled ratings apply to 5000 ft (1525 m) and 77° F (25° C). **Naturally aspirated** engines apply to 500 ft (150 m) and 85° F (29° C). For applications which exceed these limits consult your Caterpillar dealer.

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

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