Image shown may not reflect actual package

NATURAL GAS
CONTINUOUS / STANDBY
170 ekW 213 kVA / 215 ekW 269 kVA
60 HZ 1800 RPM

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

FEATURES

FULL RANGE OF ATTACHMENT
- Wide range of bolt-on system expansion attachments, factory designed and tested.
- Flexible packaging options for easy and cost effective installation.

PROVEN SYSTEM
- Fully prototype tested.
- Field proven in a wide range of applications worldwide.
- Certified torsional vibration analysis available.

WORLDWIDE PRODUCT SUPPORT
- Cat® dealers provide extensive post sales support including maintenance and repair agreements
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- The Cat® S•O•S SM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT® G3406 TA GAS ENGINE
- Robust high speed diesel block design provides prolonged life and lower owning and operating costs
- Designed for maximum performance on low pressure gaseous fuel supply.
- Simple open chamber combustion system for reliability and fuel flexibility.

CAT SR4 GENERATOR
- Designed to match performance and output characteristics of Cat gas engines
- Industry leading mechanical and electrical design
- High efficiency

CAT EMCP II+ CONTROL PANEL
- Simple user friendly interface and navigation
- Digital monitoring, metering and protection setting
- Fully-featured power metering and protection setting
- UL 508A Listed
- Remote control and monitor capability options

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Single element, canister-type air cleaner Service indicator	
Cooling	Radiator with guard Coolant drain lines with valves Fan and belt guards Cat coolant Low coolant level sensors	Jacket water heater with shutoff valves Radiator removal
Exhaust	Stainless steel exhaust flex with weld outlet flange	15 dBA muffler Spark arresting muffler Exhaust system accessories
Fuel	Gas pressure regulator Low pressure fuel system Energize to Run (ETR) gas shutoff valve	
Generator	Self-excited Class H insulation Class F temperature rise VR6 voltage regulator, 3 phase sensing with reactive droop 2:1 Volts/Hz or 1:1 Volts/Hz Bus bar terminations Extension box	Permanent magnet excited Digital Voltage Regulator Digital Voltage Regulator with KVAR-PF control Anit-condensation space heater Oversize and premium generators Circuit breakers, UL, 3 pole with shunt trip Multiple breaker capacity Auxillary contacts
Governing	Flo-Tech 68 speed control	Electronic load sharing
Ignition	Digital Ignition System Individual cylinder Detonation Sensitive Timing (DST)	
Control Panel	EMCP II+	Customer Communication Module Local alarm module and remote annunciator modules Customer Interface Module Dust-proof enclosure AC Contactor Manual Synchronizing Module
Lubrication	Lubricating oil and filter Oil drain line and valve Fumes disposal	Manual sump pump
Mounting	Narrow base Linear vibration isolators between base and engine-generator	
Starting / Charging	35 amp charging alternator 24 Volt starting motor Batteries with rack and cables Battery disconnect switch	Battery chargers, 5 and 10 amp Oversize batteries Battery removal
General	Paint - Caterpillar Yellow except rails	Automatic Transfer Switches (ATS) Floor standing circuit breakers Optional languages and extra literature Special paint Special test reports CSA Certification

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SPECIFICATIONS

GAS ENGINE

G3406C TA, I-6, 4-stroke-cycle, gas engine	
Bore --- mm (in)	137.2 (5.4)
Stroke --- mm (in)	165.10 (6.5)
Displacement --- L (cu in)	14.64 (893.39)
Compression Ratio	9.4:1
Aspiration	Turbocharged
Cooling Type	Separate Circuit Aftercooled
Ignition System	Digital Ignition
Governor Type	Woodard Flo-Tech

SR4 GENERATOR

Frame size	447
Excitation	Self Excited
Pitch	0.75
Number of poles	4
Number of bearings	1
Number of leads	12
nsulation	Class H with tropicalization and antibrasio
IP rating	Drip proof IP22
Alignment	Pilot shaft
Overspeed capability -- % of rated	150%
Waveform deviation line to line, no load	less than 3.0%
Voltage regulator	VR6
Voltage level adjustment	+/- 5.0%
Voltage regulation, steady state	+/- 0.5%
Voltage regulation with 3% speed chang	+/- 0.5%
Telephone Influence Factor (TIF)	less than 50
Voltages available	600,480,440,240,220,208 Volts

CAT EMCPII+ CONTROL PANEL

- Power by 24 volts DC
- NEMA 12, IP44 dust-proof enclosure
- Lockable hinged door
- Single-location customer connection
- Auto start/stop control switch
- Voltage adjustment potentiomenter
- True RMS AC metering, 3 phase
- Purge cycle and staged shutdown logic
- Digital indication for:
  - RPM
  - Operating hours
  - Oil pressure
  - Coolant temperature
  - DC voltage
  - L-L volts, L-N volts, phase amps, Hz, ekW, kVA, kVAR, kWhr, %kW, pf
  - System diagnostic codes
- Shutdown with indicating lights;
  - Low oil pressure
  - High coolant temperature
  - High oil temperature
  - Overspeed
  - Overcrank
  - Emergency stop
  - High inlet air temperature (TA engine only)
  - Detonation sensitive timing (LE engine only)
- Programmable protective relaying functions:
  - Under / Over voltage
  - Under / Over frequency
  - Overcurrent
  - Reverse power
- Spare indicator LEDs
- Spare alarm/shutdown inputs

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TECHNICAL DATA

Generator Set - 1800 rpm / 60 Hz			DM0845		DM0853	
G3406 Gas Generator Set			**Continuous**		**Standby**	
Aftercooler SCAC (Stage 2)	°C	°F	54	130	54	130
Package Performance						
Power Rating @ 0.8 pf (with water pumps and with fan)	ekW		170		215	
Electric Efficiency @ 0.8 pf (ISO 3046/1 w/o fan)	%		33		33	
Mechanical Power (with water pumps and w/o fan)	bkw	bhp	206	276	251	337
Fuel Consumption (Nominal)						
100% load with fan	Nm^3/hr	sch/hr	60.8	2263	73.5	2747
75% load with fan	Nm^3/hr	sch/hr	40.9	1850	58	2162
50% load with fan	Nm^3/hr	sch/hr	38.8	1444	42.4	1573
Low heat value range	(MI/Nm^3)	btu/ft^3	31.5 - 47.2	800-1200	31.5 - 47.2	800-1200
Full power range	methane #		60 to 100		60 to 100	
Fuel pressure	kPa	PSI	10.3 - 34.5	1.5 - 5	10.3 - 34.5	1.5 - 5
Altitude Capability						
At 25° C (77° F) ambient, above sea level	m	ft	1524	5000	1500	4922
Cooling System						
Ambient air temperature *	°C	°F	40	105	40	105
Air flow restriction (system)	in water	kPa	0.012	0.5	0.012	0.5
Air flow (maximum @ rated speed for standard radiator arrangement)	m^3/min	cfm	836	29524	836	29524
Engine coolant capacity	L	gal	57	15	57	15
Jacket water outlet temperature	°C	°F	99	210	99	210
Exhaust System						
Combustion air inlet flow rate (77°F, 14.7 psi)	Nm^3/min	scfm	10	385	11.6	448
Exhaust stack gas temperature	°C	°F	541	1007	570	1059
Exhaust gas flow rate (wet)	Nm^3/min	cfm	11	1176	12.9	1422
Exhaust flange size (internal diameter)	mm	in	5	127	5	127
Exhaust system backpressure (maximum allowable)	kPa	in. water	27	6.7	27	6.7
Heat Rejection						
Heat rejection to jacket water and oil cooler	kW	Btu/min	222	12630	257	14635
Heat rejection to exhaust (LHV to 350°F)	kW	Btu/min	97	5543	123	7021
Heat rejection to A/C	kW	Btu/min	6.8	387	14	819
Heat rejection to atmosphere from engine	kW	Btu/min	24	1365	29	1655
Heat rejection to atmosphere from generator	kW	Btu/min	9	512	11	626
Generator						
Frame			447		447	
Temperature rise	°C	°F	80	144	105	189
Motor starting capability @ 30% voltage dip **	skVA		579		579	
Emissions without Catalyst * **						
NO_x @ 5% O_2 (dry)	mg/Nm^3	g/bhp-hr	5828	14.8	5828	14.8
CO @ 5% O_2 (dry)	mg/Nm^3	g/bhp-hr	6810	14.8	6810	14.8
THC @ 5% O_2 (dry)	mg/Nm^3	g/bhp-hr	730	1.9	730	1.9
NMHC @ 5% O_2 (dry)	mg/Nm^3	g/bhp-hr	110	0.3	110	0.3
Exhaust O_2 (dry)	%		0.2		0.2	

RATING DEFINITIONS AND CONDITIONS

* Ambient capability at 200m (660 ft) above sea level.
For ambient capability at other altitudes, consult your Cat dealer.

** Assume synchronous driver

*** Emissions data measurement is consistent with those described in EPA CFR 40 Part 89 Suboart D and ISO8178-1 for measuring HC,CO,CO_2, and NO_X . Data shown is based on steady state operating conditions of 25° C (77° F), 96.28 kPa (28.43 in. Hg), and fuel having a LHV of 905 Btu/scf (35.6 MJ/Nm^3) and 80 Cat Methane Number at 30.0 in Hg (101.6 kPa) absolute and 32° F (O°C).

Proper air-fuel-ratio-control and three way catalyst must be employed to reduce emissions. It is the customer's responsibility to complete site-specific emissions to demonstrate compliance with US EPA NSPS.

Continuous --- Maximum output available for an unlimited time

Ratings are based on ISO3046/1 standard reference conditions of 25° C (77° F) and 100 kPa (29.61 in. Hg).

Ratings are based on pipeline natural gas having a LHV (low heat value) of 35.6 mJ/Nm^3 (905 Btu/cu.ft). Variations in altitude, temperature, and gas of a three way catalyst may require a reduction in engine horsepower.

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DIMENSIONS

Package Dimensions		
Length	4205.1 mm	165.55 in
Width	1532.5 mm	53.25 in
Height	2138.6 mm	84.20 in
Approx. Shipping Weight	4318 kg	9500 lb

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #233-9412)

Performance Number : DM0845
Feature Codes: 406GS02
Generator Arr:: 193-8725
Source: US Sourced
LEHE0296-00 (04-11)

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