

Datasheet

HGM2500SG/6 Googol Diesel Power Generator

**1800kW-2250kVA
2000kW-2500kVA
60Hz**



Googol diesel generators are powered by Googol engines which are being manufactured by latest US based technology. Googol engines are known for cost effective reliable power solution.

Features

Googol power generators are designed to operate under extreme conditions with low operational and maintenance cost.

Honny power manufacture and test it's products under strict QC rules to insure international manufacturing standard.

Equipment

Engine and alternator mounted on same frame steel skid.
Build in damper for anti-vibration.
Compact design, easy to operate and maintain.
Sino-US Googol brand engine
Top brand AC alternator
Full range protections, alarms with auto shutdown features.
Comply with ISO8628 national standard and ISO9001 quality standard. Specially designed horizontal/vertical, engine driven/electrical radiator. Industrial, Residential silencers
Catalytic converters
Heat exchangers
Special spark arrester silencers
Standard set for "CE" certification
Sound & Weatherproof canopy optional
Spring, seismic anti-vibration mounts
Advanced facility for FAT.

Diesel Generator Specification

Genset Model		HGM2500SG/6
Genset Prime Output	kW/kVA	1800/2250
Genset Standby Output	kW/kVA	2000/2500
Rating Power Factor		0.8
Rating Speed	rpm	1200
Rating Frequency	Hz	60
Rating Voltage	V	480
Engine Model		QTA5400-SG2
Displacement	l	88.5
Configuration		20V
Genset Size-Open Type	mm	8000x2600x3500
Genset Weight	kg	20000

Engine Data in General

Aspiration Type		Turbocharger, air-water aftercooler
Injection Type		Direct Injection
Configuration		Vee
No. of Cylinders		20
Displacement	l	88.5
Bore	mm	170
Stroke	mm	195
Compression Ratio		13.5:1
Piston Speed	m/s	7.8
Rotation Direction (from flywheel)		Counter Clockwise
Number of Flywheel Teeth		218
Flywheel House Size		SAE00-21

Engine Specification

Engine Model		QTA5400-SG2
Speed	rpm	1200
Standby Output (LTP)	kW	2220
Prime Output (PRP)	kW	2000
Engine Continuous Power (COP)	kW	1668
Fan Quantity		1
All Fans Reduction	kW	90
Engine Net Standby Output (LTP)	kW	2130
Engine Net Prime Output (PRP)	kW	1910
Engine Net Continuous Output (COP)	kW	1578
BMEP for Standby Output	bar	24.55
BMEP for Prime Output	bar	22.2
BMEP for Continuous Output	bar	18.67
Typical Generation Standby Output	kW	2000
Typical Generation Prime Output	kW	1800
Typical Generation Continuous Output	kW	1500
Typical Alternator Efficiency		96.0%
Speed droop (static) elect. Gov.		0-5%
Governing standards to ISO 8528		G3
Max. step load acceptance, 1st step (% PRP)		45%

Lubrication System

Lube Oil Specification		AFI-CG4
Oil Capacity	l	300
Max. Permissible Oil Temperature	°C	110
Oil Pressure Warning	kPa	300
Oil Pressure Shutdown	kPa	200
Oil Consumption (as % of fuel consumption)	%	≤0.5

Electrical System

Charging Alternator Voltage	V	28
Charging Alternator Capacity	A	55
Starting Voltage	V	24
Starting Motor Capacity	kW	2*13
Minimum Battery Capacity (Ref. Varta brand)	Ah	4*200

Fuel System

Governor Type		Electrical
Fuel Consumption at 25% of PRP	l/h	145
Fuel Consumption at 50% of PRP	l/h	243
Fuel Consumption at 75% of PRP	l/h	355
Fuel Consumption at 100% of PRP	l/h	464
Lowest Fuel Consumption Ratio	g/kW.hr	194

Intake & Exhaust System

Combustion Air Consumption	m ³ /min	222
Max. Intake Restriction	KPa	5
Exhaust Temperature (Before Turbo)	°C	580
Exhaust Temperature (After Turbo)	°C	460
Max. Exhaust Back Pressure	KPa	5
Exhaust Gas Flow	m ³ /min	555
Turbo Bellows Diameter	mm	DN250
Exhaust Flange Diameter	mm	DN250

Cooling System

Coolant Capacity for Engine	l	200
Max. Permissible Temperature	°C	90
Max. Coolant Warning Temperature	°C	95
Max. Coolant Shutdown Temperature	°C	98
Thermostat Open Temperature	°C	71
Radiator Cooling Flow	m ³ /min	3000
Flow of Cylinder liner Coolant pump	m ³ /h	60
Flow of aftercooler Coolant pump	m ³ /h	72
Heat dissipation (engine radiator)	kW	732
Heat dissipation (CAC)	kW	435
Heat dissipation (convection)	kW	113

Alternator Specification

Generator Model		GP2250-6P
Voltage of Genset	V	480
Rating Speed	rpm	1200
Frequency	Hz	60
Capacity @ 0.8PF, H Rise Class	kW	1800
Efficiency @ 0.8PF	%	96
Duty		S1
Bearing		Double
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over speed	rpm	1650
Excitation System		AVR
AVR Model		MX321
Poles		6

Performance Parameter

Frequency

Frequency Droop	%	≤5
Steady-state Frequency Band	%	≤0.5
Related Downward Range of Frequency Setting	%	≥2.5
Related Upward Range of Frequency Setting	%	≥+2.5
Change Rate of Frequency Setting	%	0.2 ~ 1

Transient Frequency Deviation

100% sudden power decrease	%	≤10
Sudden Power Increase	%	≤7
100% sudden power decrease	%	≤+10
Sudden Power Increase	%	≤-7
Frequency Recovery Time	sec	≤3
Related Frequency Tolerance Band	%	2

Voltage

Steady-state Voltage Deviation	%	≤±1
Voltage Unbalance	%	1
Range of Voltage Setting	%	±5
Change Rate of Voltage Setting	%	0.2 ~1

Transient Voltage Deviation

100% Sudden Power Decrease	%	≤+20
Sudden Power Increase	%	≤-15
Voltage Recovery Time	s	≤2

Voltage Waveform & EMC Compatibility

Sin. Distortion	%	4
Coefficient Variation	%	5
Individual Harmonic Content	%	2
Radio Interference THF	%	≤2

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