HONNY POWER

Datasheet

HGM2200SG Googol Diesel Power Generator

1600kW-2000kVA
1760kW-2200kVA
50Hz

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		HGM2200SG
Genset Prime Output	kW/kVA	1600/2000
Genset Standby Output	kW/kVA	1760/2200
Rating Power Factor		0.8
Rating Speed	rpm	1000
Rating Frequency	Hz	50
Rating Voltage	V	400
Engine Model		QTA5400-SG1
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-SG1
Speed	rpm	1000
Standby Output (LTP)	kW	1908
Prime Output (PRP)	kW	1739
Engine Continuous Power (COP)	kW	1529
Fan Quantity		1
Fan Reduction	kW	55
Engine Net Standby Output (LTP)	kW	1853
Engine Net Prime Output (PRP)	kW	1684
Engine Net Continuous Output (COP)	kW	1474
BMEP for Standby Output	bar	-
BMEP for Prime Output	bar	22.15
BMEP for Continuous Output	bar	20.02
Typical Generation Standby Output	kW	1760
Typical Generation Prime Output	kW	1600
Typical Generation Continuous Output	kW	1400
Typical Alternator Efficiency		95.0%
Speed droop (static) elect. Gov.		0-5%
Governing standards to ISO 8528		G3
Max. step load acceptance, 1st step (% PRP)		40%

Lubrication System

Lube Oil Specification		API-CF4
Oil Capacity	l	300
Max. Permissible Oil Temperature	°C	110
Oil Pressure Warning	kPa	300
Oil Pressure Shutdown	kPa	200

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	6*120

Fuel System

Governor Type		Electrical
Fuel Consumption at 25% of PRP	l/h	124
Fuel Consumption at 50% of PRP	l/h	214
Fuel Consumption at 75% of PRP	l/h	295
Fuel Consumption at 100% of PRP	l/h	389
Lowest Fuel Consumption Ratio	g/kW.hr	187

Intake & Exhaust System

Combustion Air Consumption	m³/min	200
Max. Intake Restriction	KPa	2
Exhaust Temperature (Before Turbo)	°C	560
Exhaust Temperature (After Turbo)	°C	450
Max. Exhaust Back Pressure	KPa	2
Exhaust Gas Flow	m³/min	520
Turbo Bellows Diameter	mm	2*DN250
Exhaust Flange Diameter	mm	2*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	m³/min	2800
Flow of Cylinder liner Coolant pump	m³/h	64
Flow of aftercooler Coolant pump	m³/h	50
Heat dissipation (engine radiator)	kW	625
Heat dissipation (CAC)	kW	375
Heat dissipation (convection)	kW	110

Alternator Specification

Generator Model		**GP2000-6P**
Voltage of Genset	V	400
Rating Speed	rpm	1000
Frequency	Hz	50
Capacity @ 0.8PF, H Rise Class	kW	1600
Efficiency @ 0.8PF	%	95.50%
Duty		S1
Bearing		Double
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over speed	rpm	1650
Excitation System		AVR
Poles		6

HONNY POWER®

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

Guangdong Honny Power-tech Co., Ltd.
Tel: 0086-769-2278 0359
Fax: 0086-769-2278 0357
Email: sales@honnypower.com
Website: www.honnypower.com
Address: No.2, Industry North Road, Songshan Lake, Dongguan, China

CE SGS TÜV BUREAU VERITAS