

## Datasheet

### HGM3025 Googol Diesel Power Generator

**2200kW-2750kVA  
2420kW-3025kVA  
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		HGM3025
Genset Prime Output	kW/kVA	2200/2750
Genset Standby Output	kW/kVA	2420/3025
Rating Power Factor		0.8
Rating Speed	rpm	1500
Rating Frequency	Hz	50
Rating Voltage	V	400
Engine Model		QTA5400-G3
Displacement	l	88.5
Configuration		20V
Genset Size-Open Type (LxWxH)	mm	8000x2900x3500
Genset Weight	kg	25000

## 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	9.75
Rotation Direction (from Flywheel)		Counter Clockwise
Number of Flywheel Teeth		218
Flywheel House Size		SAE00-21

## Engine Specification

Engine Model		QTA5400-G3
Speed	rpm	1500
Standby Output (LTP)	kW	2686
Prime Output (PRP)	kW	2442
Engine Continuous Power (COP)	kW	2085
Fan Reduction	kW	134
Engine Net Standby Output (LTP)	kW	2552
Engine Net Prime Output (PRP)	kW	2308
Engine Net Continuous Output (COP)	kW	1951
BMEP for Standby Output	bar	23.99
BMEP for Prime Output	bar	21.92
BMEP for Continuous Output	bar	18.67
Typical Generation Standby Output	kW	2420
Typical Generation Prime Output	kW	2200
Typical Generation Continuous Output	kW	1872
Typical Alternator Efficiency		96.0%
Rating Power Factor		0.8
Speed droop (static) elect. Gov.		0-5%
Governing standards to ISO 8528		G3
Max. step load acceptance, 1st step		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	24.00
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	181
Fuel Consumption at 50% of PRP	l/h	301
Fuel Consumption at 75% of PRP	l/h	431
Fuel Consumption at 100% of PRP	l/h	567
Lowest Fuel Consumption Ratio	g/kW.hr	194

## Intake & Exhaust System

Combustion Air Consumption	m <sup>3</sup> /min	275
Max. Intake Restriction	KPa	5
Exhaust Temperature (Before Turbo)	°C	660
Exhaust Temperature (After Turbo)	°C	540
Max. Exhaust Back Pressure	Kpa	5
Exhaust Gas Flow	m <sup>3</sup> /min	688
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 <sup>3</sup> /min	3800
Flow of Cylinder liner Coolant pump	m <sup>3</sup> /h	75
Flow of aftercooler Coolant pump	m <sup>3</sup> /h	90
Heat dissipation (engine radiator)	kW	916
Heat dissipation (CAC)	kW	550
Heat dissipation (convection)	kW	147

## Alternator Specification

<b>Generator Model</b>		<b>GP2750-4P</b>
Voltage of Genset	V	400
Rating Speed	rpm	1500
Frequency	Hz	50
Capacity @ 0.8PF, H Rise Class	kW	2200
Efficiency @ 0.8PF	%	96
Duty		S1
Bearing		Double
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over Speed	rpm	2250
Excitation System		AVR
AVR Model		MX321
Poles		4

## 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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