

## Datasheet

### HGM825 Googol Diesel Power Generator

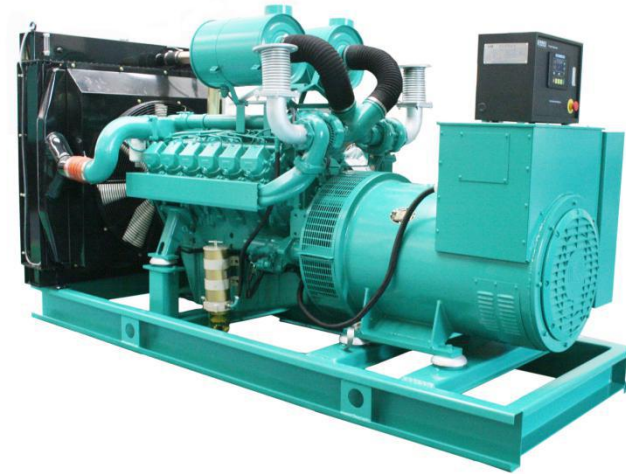
**600kW- 750kVA**  
**660kW- 825kVA**  
**50Hz**

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		HGM825
Genset Prime Output	kW/kVA	600/750
Genset Standby Output	kW/kVA	660/825
Rating Power Factor		0.8
Rating Speed	rpm	1500
Rating Frequency	Hz	50
Rating Voltage	V	400
Engine Model		PTAA1340-G5
Displacement	l	21.9
Configuration		12V
Genset Size-Open Type (LxWxH)	mm	3700x1450x2100
Genset Weight	kg	4400

## Engine Data in General

Aspiration Type		Turbocharger, air-air aftercooler
Injection Type		Direct Injection
Configuration		Vee
No. Of Cylinders		12
Displacement	l	21.9
Bore	mm	128
Stroke	mm	142
Compression Ratio		15:1
Piston Speed	m/s	7.1
Rotation Direction (from Flywheel)		Counter Clockwise
Number of Flywheel Teeth		204
Flywheel House Size		SAE0-18

## Engine Specification

Engine Model		PTAA1340-G5
Speed	rpm	1500
Engine Standby Output (LTP)	kW	745
Engine Prime Output (PRP)	kW	682
Engine Continuous Power (COP)	kW	520
Fan Reduction	kW	32
Engine Net Standby Output (LTP)	kW	713
Engine Net Prime Output (PRP)	kW	650
Engine Net Continuous Output (COP)	kW	488
BMEP for Standby Output	bar	26.8
BMEP for Prime Output	bar	24.48
BMEP for Continuous Output	bar	18.64
Typical Generation Standby Output	kW	660
Typical Generation Prime Output	kW	600
Typical Generation Continuous Output	kW	450
Typical Alternator Efficiency		94.1%
Power Factor		0.8
Speed Droop (Static) Elect. Gov.		0-5%
Governing Standards to ISO 8528		G3
Max. Step Load Acceptance, 1st Step		53.0%

## Lubrication System

Lube Oil Specification		AFI-CG4
Oil Capacity	l	36
Max. Permissible Oil Temperature	°C	110
Oil Pressure Warning	kPa	200
Oil Pressure Shutdown	kPa	160
Oil Consumption (as % of Fuel Consumption)	%	≤0.5

## Electrical System

Charging Alternator Voltage	V	28
Charging Alternator Capacity	A	35
Starting Voltage	V	24
Starting Motor Capacity	kW	1*6.6
Minimum Battery Capacity (Ref. Varta Brand)	Ah	2*200

## Fuel System

Governor Type		Electrical
Engine Output at PRP	kW	682
Fuel Consumption at 25% of PRP	l/h	52
Fuel Consumption at 50% of PRP	l/h	86
Fuel Consumption at 75% of PRP	l/h	123
Fuel Consumption at 100% of PRP	l/h	162
Lowest Fuel Consumption Ratio	g/kW.hr	199

## Intake & Exhaust System

Combustion Air Consumption	m <sup>3</sup> /min	56
Max. Intake Restriction	KPa	5
Exhaust Temperature (Before Turbo)	°C	670
Exhaust Temperature (After Turbo)	°C	545
Max. Exhaust Back Pressure	Kpa	5
Exhaust Gas Flow	m <sup>3</sup> /min	68
Turbo Bellows Diameter	mm	DN150
Exhaust Flange Diameter	mm	DN150

## Cooling System

Coolant Capacity for Engine	l	23
Max. Permissible Temperature	°C	90
Max. Coolant Warning Temperature	°C	95
Max. Coolant Shutdown Temperature	°C	105
Thermostat Open Temperature	°C	79
Radiator Cooling Flow	m <sup>3</sup> /min	773
Flow of Coolant Pump	m <sup>3</sup> /h	42
Heat Dissipation (Engine Radiator)	kW	355
Heat Dissipation (Convection)	kW	54

## Alternator Specification

<b>Generator Model</b>		<b>GP750-4P</b>
Voltage of Genset	V	400
Rating Speed	rpm	1500
Frequency	Hz	50
Capacity @ 0.8PF, H Rise Class	kW	600
Efficiency @ 0.8PF	%	94.1
Duty		S1
Bearing		Single
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over speed	rpm	2250
Excitation System		AVR
AVR Model		MX341
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**

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

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