

## Datasheet

### HGM413/6 Googol Diesel Power Generator

**300kW-375kVA**  
**330kW-412.5kVA**  
**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

<b>Genset Model</b>		HGM413/6
Genset Prime Output	kW/kVA	300/375
Genset Standby Output	kW/kVA	330/412.5
Rating Power Factor		0.8
Rating Speed	rpm	1800
Rating Frequency	Hz	60
Rating Voltage	V	480 (240)
Engine Model		PTA780G4
Displacement	l	12.8
Configuration		6 in line
Genset Size-Open Type (LxWxH)	mm	3100x1150x1600
Genset Weight	kg	2730

## Engine Data in General

Aspiration Type		Turbocharger, air-water aftercooler
Injection Type		Direct Injection
Configuration		In line
No. Of Cylinders		6
Displacement	l	12.8
Bore	mm	128
Stroke	mm	166
Compression Ratio		15.5:1
Piston Speed	m/s	9.96
Rotation Direction (from Flywheel)		Counter Clockwise
Number of Flywheel Teeth		160
Flywheel House Size		SAE1-14

## Engine Specification

<b>Engine Model</b>		<b>PTA780G4</b>
Speed	rpm	1800
Engine Standby Output (LTP)	kW	386
Engine Prime Output (PRP)	kW	353
Engine Continuous Power (COP)	kW	310
Fan Reduction	kW	19
Engine Net Standby Output (LTP)	kW	367
Engine Net Prime Output (PRP)	kW	334
Engine Net Continuous Output (COP)	kW	291
BMEP for Standby Output	bar	19.53
BMEP for Prime Output	bar	17.87
BMEP for Continuous Output	bar	15.63
Typical Generation Standby Output	kW	330
Typical Generation Prime Output	kW	300
Typical Generation Continuous Output	kW	260
Typical Alternator Efficiency		92.5%
Power Factor		0.8
Speed Droop (Static) Elect. Gov.		0-5%
Governing Standards to ISO 8528		G3
Max. Step Load Acceptance, 1st Step		65%

## Lubrication System

Lube Oil Specification		API-CF4
Oil Capacity	l	40
Max. Permissible Oil Temperature	°C	110
Oil Pressure Warning	kPa	200
Oil Pressure Shutdown	kPa	160
Oil Consumption (as % of Fuel Consumption)	%	≤1

## Electrical System

Charging Alternator Voltage	V	28
Charging Alternator Capacity	A	35
Starting Voltage	V	24
Starting Motor Capacity	kW	6.6
Minimum Battery Capacity (Ref. Varta Brand)	Ah	2*120

## Fuel System

Governor Type		Electrical
Fuel Consumption at 25% of PRP	l/h	28
Fuel Consumption at 50% of PRP	l/h	47
Fuel Consumption at 75% of PRP	l/h	67
Fuel Consumption at 100% of PRP	l/h	89
Lowest Fuel Consumption Ratio	g/kW.hr	210

## Intake & Exhaust System

Combustion Air Consumption	m <sup>3</sup> /min	32
Max. Intake Restriction	KPa	5
Exhaust Temperature (Before Turbo)	°C	660
Exhaust Temperature (After Turbo)	°C	515
Max. Exhaust Back Pressure	Kpa	5
Exhaust Gas Flow	m <sup>3</sup> /min	42
Turbo Bellows Diameter	mm	DN100-150
Exhaust Flange Diameter	mm	DN150

## Cooling System

Coolant Capacity for Engine	l	18
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	450
Flow of Coolant Pump	m <sup>3</sup> /h	23.6
Heat Dissipation (Engine Radiator)	kW	186
Heat Dissipation (Convection)	kW	28

## Alternator Specification

<b>Generator Model</b>		GP350-4P
Voltage of Genset	V	480(240)
Rating Speed	rpm	1800
Frequency	Hz	60
Capacity @ 0.8PF, H Rise Class	%	300
Efficiency @ 0.8PF		92.5
Duty		S1
Bearing		Single
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over speed	rpm	2250
Excitation System		AVR
AVR Model		SX440
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

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

