

## Datasheet

### HGM28 Googol Diesel Power Generator

**20kW-25kVA  
22kW-27.5kVA  
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

<b>Genset Model</b>		HGM28
Genset Prime Output	kW/kVA	20/25
Genset Standby Output	kW/kVA	22/27.5
Rating Power Factor		0.8
Rating Speed	rpm	1500
Rating Frequency	Hz	50
Rating Voltage	V	400
<b>Engine Model</b>		B170G1
Displacement	l	2.77
Configuration		4 in line
Genset Size-Open Type (LxWxH)	mm	1600*700*1200
Genset Weight	kg	700

### Engine Data in General

Aspiration Type		Natural Aspiration
Injection Type		Direct Injection
Configuration		In Line
No. of Cylinders		4
Displacement	l	2.77
Bore	mm	93
Stroke	mm	102
Compression Ratio		17.5:1
Rotation Direction (from Flywheel)		Counter Clockwise
Flywheel House Size		SAE4/7.5"

### Engine Specification

<b>Engine Model</b>		<b>B170G1</b>
Speed	rpm	1500
Engine Standby Output (LTP)	kW	27
Engine Prime Output (PRP)	kW	24
Speed Droop (static) Elect. Gov.		0-5%
Governing Standards to ISO 8528		G3
Max. Step Load Acceptance, 1st Step (% PRP)		60%

### Lubrication System

Lube Oil Specification		API-CF4
Oil Capacity	l	5.8
Max. Permissible Oil Temperature	°C	110
Oil Pressure Warning	kPa	200
Oil Pressure Shutdown	kPa	100

### Cooling System

Coolant Capacity for Engine	l	10
Max. Coolant Warning Temperature	°C	98
Max. Coolant Shutdown Temperature	°C	103

**Fuel System**

Governor Type		Electrical
Fuel Consumption at 75% of Genset Prime Output	g/kW.hr	230
Fuel Consumption at 100% of Genset Prime Output	g/kW.hr	221

**Intake & Exhaust System**

Max. Intake Restriction	KPa	2
Exhaust Temperature	°C	610
Max. Exhaust Back Pressure	KPa	2
Exhaust Flange Diameter	mm	45

**Electrical System**

Charging Alternator Capacity	A	50
Starting Voltage	V	12
Starting Motor Capacity	kW	2.8
Minimum Battery Capacity (Ref. Varta Brand)	Ah	1*60

**Alternator Specification**

<b>Generator Model</b>		GP28-4P
Voltage of Genset	V	400
Rating Speed	rpm	1500
Capacity @ 0.8PF, H Rise Class	kW	22
Efficiency @ 0.8PF	%	84.0
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

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