HONNY POWER

Datasheet

HGM550/6 Googol Diesel Power Generator

400kW-500kVA
440kW-550kVA
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

Genset Model		HGM550/6
Genset Prime Output	kW/kVA	400/500
Genset Standby Output	kW/kVA	440/550
Rating Power Factor		0.8
Rating Speed	rpm	1800
Rating Frequency	Hz	60
Rating Voltage	V	480 (240)
Engine Model		PTAA780G4
Displacement	l	12.8
Configuration		6 in line
Genset Size-Open Type (LxWxH)	mm	3300x1150x1600
Genset Weight	kg	2900

Engine Data in General

Aspiration Type		Turbocharger, air-air 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

Engine Model		PTAA780G4
Speed	rpm	1800
Engine Standby Output （LTP)	kW	515
Engine Prime Output (PRP)	kW	458
Engine Continuous Power (COP)	kW	370
Fan Reduction	kW	19
Engine Net Standby Output （LTP)	kW	496
Engine Net Prime Output (PRP)	kW	439
Engine Net Continuous Output (COP)	kW	351
BMEP for Standby Output	bar	25.97
BMEP for Prime Output	bar	23.20
BMEP for Continuous Output	bar	18.73
Typical Generation Standby Output	kW	450
Typical Generation Prime Output	kW	400
Typical Generation Continuous Output	kW	320
Typical Alternator Efficiency		93.7%
Power Factor		0.8
Speed Droop (Static) Elect. Gov.		0-5%
Governing Standards to ISO 8528		G3
Max. Step Load Acceptance, 1st Step		51%

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	36
Fuel Consumption at 50% of PRP	l/h	61
Fuel Consumption at 75% of PRP	l/h	87
Fuel Consumption at 100% of PRP	l/h	115
Lowest Fuel Consumption Ratio	g/kW.hr	209

Intake & Exhaust System

Combustion Air Consumption	m³/min	43
Max. Intake Restriction	KPa	5
Exhaust Temperature (Before Turbo)	°C	695
Exhaust Temperature (After Turbo)	°C	555
Max. Exhaust Back Pressure	Kpa	5
Exhaust Gas Flow	m³/min	56
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	m³/min	450
Flow of Coolant Pump	m³/h	23.6
Heat Dissipation (Engine Radiator)	kW	241
Heat Dissipation (Convection)	kW	36

Alternator Specification

Generator Model		GP450-4P
Voltage of Genset	V	480(240)
Rating Speed	rpm	1800
Frequency	kW	60
Capacity @ 0.8PF, H Rise Class	%	400
Efficiency @ 0.8PF		94.5
Duty		S1
Bearing		Single
Insulation		H
Rise Temperature		H
Enclosure		IP23
Over speed	rpm	2250
Excitation System		AVR
AVR Model		SX440
Poles		4

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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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