

HGM688E TECHNICAL DATA SHEET

Genset Model	HGM688E
Standby power (50HZ)	550kW/687.5kVA
Prime power (50HZ)	500kW/625kVA
Standard configuration	

General description:

- Engine (Googol PTAA8V-EG620)
- Ambient temperature 40°C radiator, belt-driven cooling fan, with fan safety guard
- 24VDC charger
- Alternator: single bearing, IP23, H
- Damper
- Dry type Air filter, fuel filter & oil filter
- Standard control panel
- 2×12VDC start batteries and connecting wires
- Exhaust elbow pipe, flexible pipe, conical pipe, muffler
- Documents



Genset Power							
Voltage (V)	Frequency (Hz)	Phase	Power factor	Standby Ampere (A)	Prime Ampere (A)	Standby (kW/kVA)	Prime (kW/kVA)
400/230	50	3	0.8	992.2	902	550/687	500/625
380/220	50	3	0.8	1044.5	949.5	550/687	500/625

RATING DEFINITION AS PER ISO8528

Prime Power (PRP): Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated kW with 10% overload capability for emergency use for a maximum of 1 hour in 12.

Standby Power Rating (ESP): Output available with varying load during a normal power supply failure. Average power output is 80% of the standby power rating. Typical annual operating time less than 500 hours. No overload is available.

The relationship between engine power and altitude: above 1500 meters above sea level, the power decreases by 4% for every 300 meters above sea level.

Warranty

The products provided by HONNY Company are all brand-new products, and each unit has undergone strict factory inspection.

All products of HONNY Company provide warranty service. The warranty period is 12 months after delivery or 1000 hours of operation in total, whichever expires first.

Engine data	
Engine data	
Manufacturer/Model	Googol /PTAA8V-EG620
Air intake system	Turbocharged, air-to-air cooling
Fuel System	High pressure Common Rail

Cylinder/Alignment	V-type 8-cylinder, four-stroke	
Displacement Litre	16.6L	
Bore x stroke mm	135×145（mm）	
Compression ratio	15.5:1	
Rated Engine speed RPM	1500	
Engine Standby Power kW/HP	620/843.5	
Common engine power kW/HP	560/761.9	
Injection system	ECU Electronic injection system	
Exhaust system		
Exhaust flow m³/min	53.8	
Exhaust temperature °C	≤520	
Maximum allowable exhaust back pressure kPa	5	
Air intake system		
Gas volume (rated power) m³/min	44.8	
Cooling Air Flow m³/min	625.2	
Maximum allowable air intake resistance kPa	5	
Fuel consumption		
100% common power (L/h)	136.7	L/h
75% common power (L/h)	101.2	L/h
50% common power (L/h)	70	L/h
25% common power (L/h)	38.6	L/h
Fuel consumption rate		
100% common power (g/kW.h)	228.3	
75% common power (g/kW.h)	225.3	
50% common power (g/kW.h)	233.8	
25% common power (g/kW.h)	257.8	
Lubrication system		
Total oil capacity L	28	
Low oil pressure alarm kPa	200	
Low oil pressure parking kPa	160	
Cooling system		
Engine Coolant Capacity L	20	
Maximum coolant temperature °C	90	
Thermostat operating temperature °C	71	

Alternator data		
Alternator data		
Manufacturer/Model	Googol / GP625-4P	
Phase	400 V	
Voltage	Three-phase four-wire, Y-wound	
Number of Wires	1	
Number of bearings	0.8	
Power factor	IP23	
Protection	≤1000m	
Altitude requirements	PMG permanent magnet brushless self-excitation	
Excitation method	H/H	

Insulation class/temperature rise class	<50
Telephone Influence Factor TIF	<2%
Telephone Harmonic Factor THF	$\leq \pm 1\%$
Steady State Voltage Regulation	625kVA
Alternator capacity	95.0%
Genset Data	
Voltage setting range	$\geq \pm 5\%$
Steady State Voltage Regulation	$\leq \pm 0.2\%$
Transient voltage deviation (100% sudden drop power)	$\leq +17\%$
Transient voltage deviation (50% sudden power)	$\leq -6.5\%$
Voltage stabilization time (100% sudden drop of power)	$\leq 0.75S$
Voltage stabilization time (50% sudden power)	$\leq 0.69S$
Frequency adjustment range	$\geq \pm 5\%$
frequency volatility	$\leq \pm 0.25\%$
Transient frequency deviation (100% sudden drop in power)	$\leq +8\%$
Transient frequency deviation (50% sudden power)	$\leq -5\%$
Frequency recovery time (100% sudden drop in power)	$\leq 1.48S$
Frequency recovery time (50% surge power)	$\leq 1.35S$

HONNY GENSET QUALITY STANDARD

HONNY diesel generator sets are designed, produced and tested in strict accordance with the standards. They can be used in various environments and meet the following relevant standards:

GB/T 2820.1~6-2009、ISO8528、ISO3046、YD/T502-2020

Document

Original document from Engine	Generator Set Maintenance Record Manual
Original document from Alternator	Generator Set Installation and Operation Manual
Original document from Control panel	Generator set installation and commissioning acceptance list
Generator set original test report	Certificate of origin of the generator set

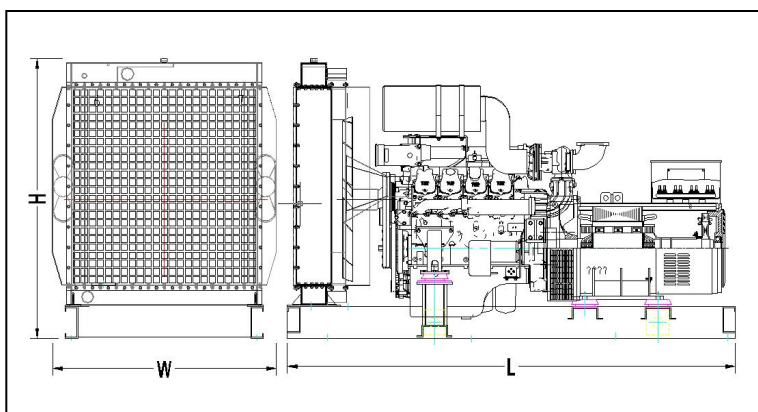
Optional accessories

Engine	Alternator	Electric elements
Water jacket heater	Anti-condensation heater	Remote control system
Oil preheater	Permanent magnet excitation system (PMG)	Control Panel with triple remote functions
Battery charger	Voltage droop (parallel use)	ATS
Air starter motor	Other temperature rise classes	Synchronized or parallel panel

Heavy Duty Air Filter for Desert	RTD temperature sensor, 2 per phase	Anti-condensation heater
Heavy Duty Secondary Muffler		Voltage 3.3kV/6.3kV/10.5kV/11kV
Fuel system	Others	Cooling system
base fuel tank&Daily fuel tank	Waterproof type	External Cooling Towers
Water separator	Silent/Soundproof /container type	Remote Radiator
Automatic oil supply system	Trailer type	Heat exchanger
Buried fuel tank	Emergency Power Supply Vehicle	Marine cooling system

Some options may not be suitable for the whole series of generator sets, please consult HONNY application engineering department or the person in charge of this project of HONNY.

Measurement and Weight



Open type

Overall: L×W×H

Overall: 3200×1450×2100

Weight: 3200kg

Automated control screen with ATS/AMF function



The use of Deep Sea DSE7320, DSE7220 or DSE6120 controllers is the control screen of the automation unit and the most basic configuration of unattended automation. The control panel is capable of receiving remote on/off unit control signals (ATS control).

Functional features: The unit has automatic, manual, shutdown (emergency stop) and other control functions, circuit breaker opening and closing buttons, rich programmable outputs, input interfaces and humanized interfaces, multi-functional LCD display, the detected parameters are displayed through data, symbols at the same time, etc., which can meet the needs of various automation units.