

MODEL: VG688CS



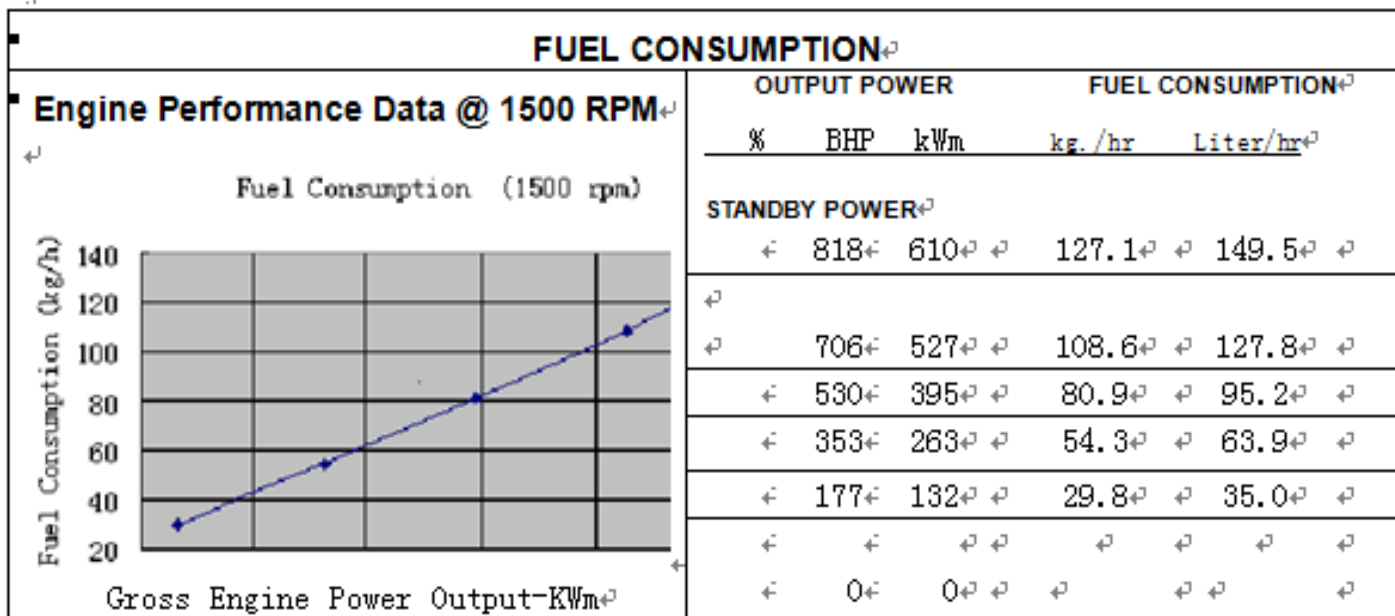
Genset Model	VG688CS
Prime Power(50HZ)	500KW/625KVA
Standby Power(50HZ)	550KW / 688KVA
Frequency/Speed	50Hz/1500rpm
Standard Voltage	230V400V
Phases	Three phases, four wires
Manufacturer	Vega Power International PTE.LTD

- ◆ Assembled by Cummins diesel engine and Stamford alternator.
- ◆ Three filters as standard, fuel and water separator as optional.
- ◆ Radiator and fan with safety guard.
- ◆ Single bearing alternator IP 23, Insulation Class H.
- ◆ Heavy duty steel as base frame and 8hrs operation base fuel tank.
- ◆ Automatic control panel and 3 poles circuit breaker, internal cable.
- ◆ 12V or 24V battery, battery wires.
- ◆ Battery charger and float battery charger as standard supply scope.
- ◆ Optional soundproof canopy, ATS, synchronization panel, movable trailers.

Engine Data:

Manufacturer	Chongqing Cummins Engine Co. Ltd.
Model	KTAA19-G6A
Engine speed	1500rpm
Engine power	
-----Standby power	610kw /818HP
-----Prime power	N/A
Type	4 cycle, In-line, 6-cylinder
Aspiration	Turbocharged and Air to Air Aftercooled
Bore * Stroke	159*159 mm
Displacement	18.9 L
Compression ratio	13.0:1
Idle speed	675 – 775 r/min
Brake mean effective pressure(standby power)	2568kPa
Piston speed	7.9 m/s
Friction horsepower	45kw(60HP)

Fuel Consumption:



Exhaust system

Max. allowable back pressure	10 kPa
Standard exhaust pipe diameter	127 mm
Maximum allowable intake air restriction	
-----with clean filter element	3.73 kPa
-----with dirty filter element	6.23 kPa
Intake Air alarm temperature	82 °C

Cooling system

Coolant capacity	
-----After-cooler Only	23 L
-----With heat exchanger	53L
-----With explanation tank & LTA	112 L
Standard thermostat(modulating) range	82-93 °C
Max. coolant temerature	96.1 °C
Max. allowable top tank temerature for standby/prime power	104/100 °C

Lubrication system

Oil Pressure	
-----Idle speed	138 kPa
-----Rated speed	345-483 kPa
Max. allowable oil temperature	121°C
Oil Pan capacity - Low/High	32.2 /37.9L
Total system capacity(excluding by-pass filter)	50.0 L
Angularity of oil pan-Front Down	30 °

Fuel System

Type Injection system	Direct injection Cummins PT
Min. Allowable fuel tank vent capability	425 L/h

Electric system

Min. recommended battery capacity (24V)	
-----Cold soak at 10°C or above-----CCA	600
-----Cold soak at 0-10°C or above-----CCA	640
-----Cold soak at -18-0°C or above-----CCA	900
Max. allowable resistance of Starting circuit	0.002 ohm
Starter(heave,Anode)	24 Volt
Battery recharge system, negative ground	35 ampere

Performance data

	Standby power
Governed Engine Speed.....RPM	1500RPM
Engine Idle Speed.....RPM	725-775
Gross Engine Power Output.....KW	610
Friction Horsepower.....KW	40
Intake Air Flow.....Litre/sec	850
Exhaust Gas Flow.....Litre/sec	2478
Exhaust Gas Temperature...°C	446
Heat Rejection to Ambient/min(KW)	87
Heat Rejection to Coolant.....KW	436

Alternator Specifications:

Manufacturer	Cummins Generator Technologies(China) Co. Ltd
Model	HCI544FS
Frequency	50HZ
Voltage	400V
Output power-----Continuous duty/40°C	625kVA / 500kW
-----Stand-by/27°C	688kVA / 550kW
Phase	3 ph.
Power factor	P.F.=0.8
Insulation class	H
Winding pitch	2/3 (N° 6S)
Number of wires	6
Protection	IP23
Altitude	≤ 1000 m
Overspeed	2250 min ⁻¹
Excitation system	Shunt
AVR type	AS440
Voltage regulation	±1%
Short-circuit current	300% (3IN) 0s
Total harmonics (THD)	no load < 4%
Wave form : NEMA = TIF	< 50
Air follow	1.1 m ³ /s
Relative humidity	≤ 95%
Bearing	Single

Alternator general data :

- ◆ Operate either 50Hz or 60Hz.
- ◆ Standard enclosure IP23, but IP44, IP55 for option
- ◆ Insulation class H.
- ◆ Shunt excitataion systems.
- ◆ AREP or PMG system for options.
- ◆ Automatic voltage regulator
- ◆ Single bearing alternator
- ◆ Stator grease insulation covered
- ◆ Rotator and excitation high polymer
- ◆ Resist the corruption oil and acid
- ◆ Rotator balance is in accordance with BS5625 standard 12.5
- ◆ High-quality lubrication sealed long-time bearing
- ◆ Rotator silicon steel close tight

Control System



The **DSE6120** is made by DEEPSEA and is a new control module for single gen-set applications, and it is an Automatic Start Control Module and is simple to operate, and the module includes USB, RS232 and RS485

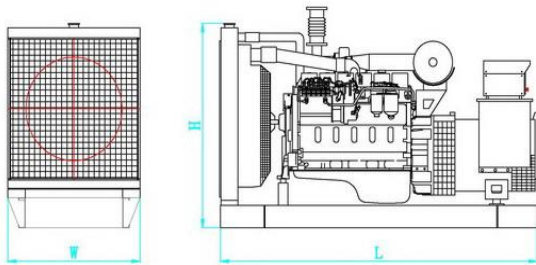
for expansion device connectivity.

Specifications: Frequency meter, Ammeter, Voltmeter
Alarms and faults Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop.

Engine parameters: Hours counter, Oil pressure, Water, temperature, Engine speed, Battery voltage, Fuel level.

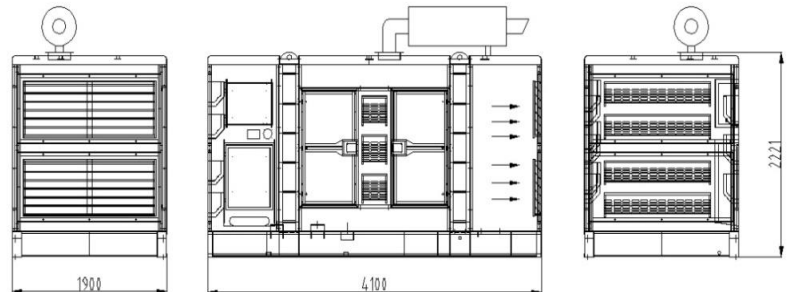
Weight and Dimensions

1. Open Version:



Open Type (Standard Configuration)
Overall Size: 3716×1550 ×2200mm(L*W*H)
Weight: 4230kg

2. Soundproof Version:



Soundproof Type
Overall size: 4000×1800×2370(L*W*H)
Weight: 5082kg