

## MODEL: VG713CS



Genset Model	VG713CS
Prime Power(50HZ)	520KW / 650KVA
Standby Power(50HZ)	570KW / 713KVA
Frequency/Speed	50Hz/1500rpm
Standard Voltage	230V/400V
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.

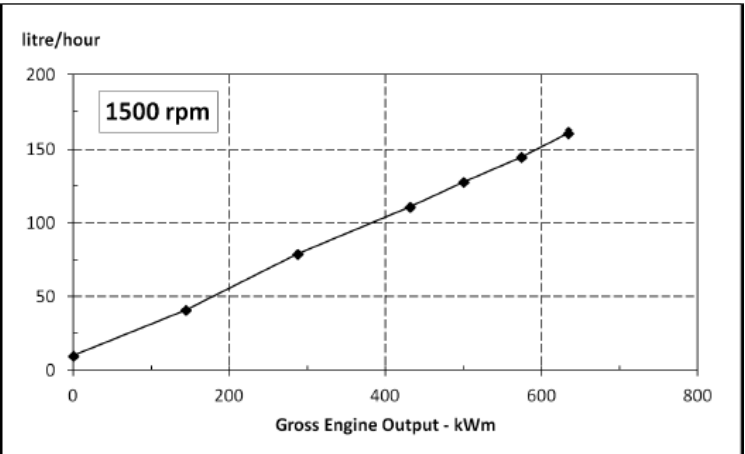
### Engine Data:

Manufacturer	Chongqing Cummins Engine Co. Ltd.
Model	QSKTAA19-G4
Engine speed	1500rpm
Engine power	
-----Standby power	634KW /850HP
-----Prime power	574KW /770HP
Type	4 cycle, In-line, 6-cylinder
Aspiration	Turbocharged and Air to Air Aftercooled
Bore * Stroke	159*159 mm
Displacement	19 L
Compression ratio	15:01
Idle speed	700_900 r/min
Brake mean effective pressure	2682_2434 kPa
Piston speed	7.9 m/s
Friction horsepower	43kw(57HP)

## Fuel Consumption:

### Engine Performance Data @ 1500 rpm

OUTPUT POWER			FUEL CONSUMPTION			
%	bhp	kWm	lb/ hp·h	kg/ kWm·h	US gal/ hour	litre/ hour
STANDBY POWER						
100	850	634	0.355	0.216	42.5	161
PRIME POWER						
100	770	574	0.354	0.215	38.4	145
75	578	431	0.360	0.219	29.2	111
50	385	287	0.384	0.234	20.8	79
25	193	144	0.400	0.243	10.8	41
CONTINUOUS POWER						
100	670	500	0.357	0.217	33.7	128



### Exhaust system

Max. allowable back pressure	6.8 kPa
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### Air induction system

Maximum allowable intake air restriction	
-----with clean filter element	3.7 kPa
-----with dirty filter element	6.2 kPa

### Cooling system

Coolant capacity	
-----Engine only	41.6 L
Standard thermostat(modulating) range	83-95 °C
Max. allowable top tank temerature for standby/prime power	104/100 °C
Max. intake manifold temerature @25°C ambient	54 °C
Max. intake manifold temerature for engine protection	82 °C

### Lubrication system

Oil Pressure	
-----Idle speed	138 kPa
-----Rated speed	276-414 kPa
Max. allowable oil temperature	121°C
Oil capacity with OP 4084 oil pan: Low/High	64.4 /71.9L
Total system capacity(including filter)	84.4 L

### Fuel System

Type Injection system	Cummins MCRS
Max. fuel inlet temperature	71°C

### 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

### Cold start capability

Unaided cold start	
Min. cranking speed	150 rpm
Min. ambient temerature for unaided cold start	-12.2°C

## Performance data

	Standby power	Prime power
Governed Engine Speed.....RPM	1500RPM	1500RPM
Engine Idle Speed.....RPM	700-900	700-900
Gross Engine Power Output.....KW	634	574
Friction Horsepower.....KW	43	43
Intake Air Flow.....Litre/sec	876	806
Exhaust Gas Flow.....Litre/sec	2206	2023
Exhaust Gas Temperature...°C	516	512
Heat Rejection to Ambient/min(KW)	65	59
Heat Rejection to Coolant.....KW	234	222

## Alternator Specifications:

Manufacturer	Cummins Generator Technologies(China) Co. Ltd
Model	HCI544F
Frequency	50HZ
Voltage	400V
Output power-----Continuous duty/40°C	670kVA / 536kW
-----Stand-by/27°C	738kVA / 590kW
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 <sup>-1</sup>
Excitation system	shunt
AVR type	AS440
Voltage regulation	±1%
Short-circuit current	300% (3IN) 0s
Waveform distortion	no load < 1.5% non-distorting balanced linear load < 5.0%
Telephone interference	THF< 2%
Air follow	1.1 m <sup>3</sup> /s
Relative humidity	≤ 95%
Bearing	Single
Coupling	Direct

## Alternator general data

- ◆ Operate either 50Hz or 60Hz.
- ◆ Standard enclosure IP23, but IP44, IP55 for option
- ◆ Insulation class H.
- ◆ Shunt excitataion systems.
- ◆ 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

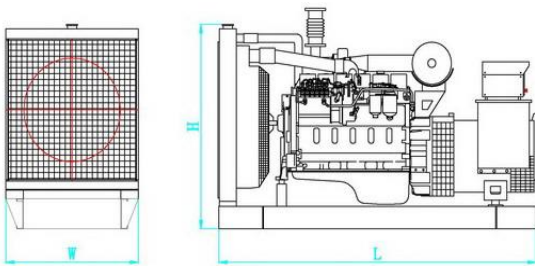
for expansion device connectivity.

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.

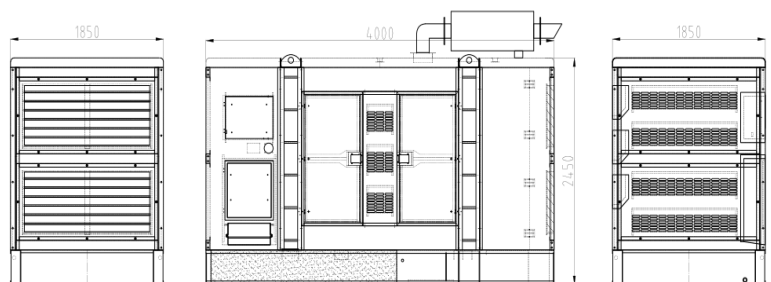
## Weight and Dimensions

### 1.Open Version:



Open Type (Standard Configuration)  
Overall Size: 3600×1550 ×2500mm(L\*W\*H)  
Weight: 6763kg

### 2. Soundproof Version:



Soundproof Type  
Overall size: 4200× 1900×2500mm(L\*W\*H)  
Weight: 7863kg

