



DATA SHEET

The power for the better life

DIESEL GENERATOR SET
50Hz/1500 rpm

MODEL: VG438CS



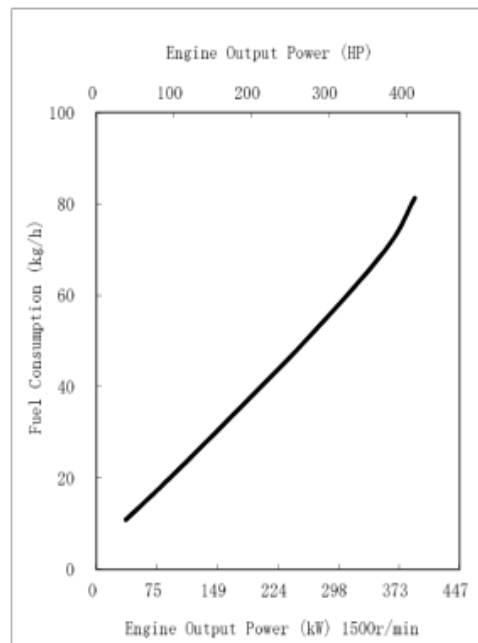
Genset Model	VG438CS
Prime Power(50HZ)	320KW / 400KVA
Standby Power(50HZ)	350KW / 438KVA
Frequency/Speed	50Hz/1500rpm
Standard Voltage	230V/400V
Phases	Three phases, four wires
Manufacturer	Vega Power International PTE.LTD

- ◆ 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.

Cummins Engine Data:

Manufacturer	Chongqing Cummins Engine Co. Ltd.
Model	QSNT-G3
Engine speed	1500rpm
Engine power	
-----Standby power	392kw /525HP
-----Prime power	358kw/480HP
Type	4 cycle, In-line, 6-cylinder
Aspiration	Turbocharged, Air-Air Cooled
Bore * Stroke	140*152 mm
Displacement	14 L
Compression ratio	16.3:1
Idle speed	575 - 650 r/min
Brake mean effective pressure	2326 kPa
Piston speed	7.62 m/s
Friction horsepower	22kw

Fuel Consumption:



	Output Power		Fuel Consumption
	HP	kW	kg/h
Standby100%	525	392	81.3
Prime100%	480	358	70.5
75%	360	269	52.3
50%	240	179	35.8
25%	120	90	20.0
10%	48	36	10.9
Cont.100%	390	291	56.9

Exhaust system

Max. allowable back pressure	10 kPa
Standard exhaust pipe diameter	127 mm

Air induction system

Maximum allowable intake air restriction	
-----with clean filter element	3.74 kPa
-----with dirty filter element	6.22 kPa
Minimum dirt holding capacity	53 g/L/s
Maximum allowable intake air temperature	17 °C

Cooling system

Coolant capacity	
-----Engine only	21 L
-----With radiator	60.6 L
-----With heat exchanger	49.2 L
Standard thermostat(modulating) range	82-94 °C
Max. coolant temerature	96 °C
Max. allowable top tank temerature for standby/prime power	104/100 °C
Min. recommended top tank temperature	71 °C

Lubrication system

Oil Pressure	
-----Idle speed	103 kPa
-----Governed speed	241-345 kPa
Max. allowable oil temperature	121°C
Max. oil consumption	0.24 L/h
Oil Pan capacity - Low/High	28.4 / 36.0 L
Total system capacity	38.6 L
Angularity of oil pan-Front Down/Front Up/Side to Side	38 °/38 °/38 °

Fuel System

Type Injection system	CELECT
Min. fuel supply line size	16 mm
Min. fuel return line size	13 mm
Max. fuel pump supply	426L
Fuel rail pressure	1196kPa
Max. Fuel temperature	71°C

Electric system

Min. recommended battery capacity (24V)	
-----Cold soak(no Load)---CCA	900
-----Min. reserved capacity---CCA	320
-----Cold soak(with Load)---CCA	900
-----Min. reserved capacity---CCA	320
Max. allowable resistance of cranking circuit	0.002 ohm
Standard cranking moto(heavey duty,positive engagement)	24 Volt
Standard battery charging system, negative ground	35 ampere

Performance data

Idle speed	575-650 r/min
Max. no-load governed speed	1800 r/min
Max over speed capability	2700 r/min

	Standby power	Prime power
Governed Engine Speed.....RPM	1500RPM	1500RPM
Engine Idle Speed.....RPM	700-800	700-800
Gross Engine Power Output.....KW	392	358
Engine Water Flow to Engine.....Litre/sec	5	5
Engine Data with Dry Type Exhaust Manifold		
Intake Air Flow.....Litre/sec	499	430
Exhaust Gas Temperature...°C	518	510
Exhaust Gas Flow - kg/h	2205	1899
Heat Rejection to AmbientkW	202	18
Heat Rejection to Coolant.....KW	114	127
Heat Radiation.....KW	324	293

Alternator Specifications:

Manufacturer	Cummins Generator Technologies(China) Co. Ltd
Model	HCI444F
Output power	400kVA / 320kW
Phase	3 ph.
Power factor	P.F.=0.8
Insulation class	H
Winding pitch	2/3 (N ° 6)
Number of wires	12
Protection	IP23
Altitude	≤ 1000 m
Overspeed	2250 min ⁻¹
Excitation system	Shunt
AVR type	AS440
Voltage regulation	±1%
Short-circuit current	N/A
Waveform distortion	no load < 1.5% non-distorting balanced linear load < 5.0%
Telephone interference	THF< 2%
Air follow	1.1 m ³ /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.
 - ◆ 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

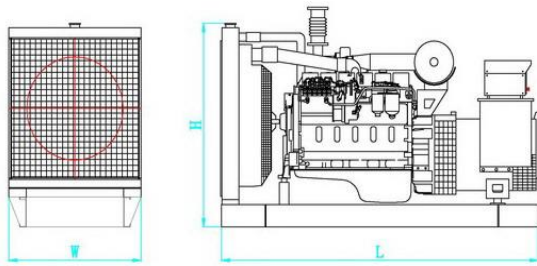
for expansion device connectivity.

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.

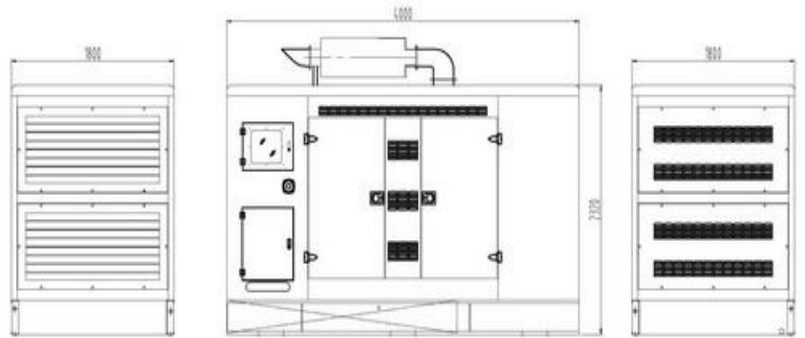
Weight and Dimensions

1. Open Version:



Open Type (Standard Configuration)
Overall Size: 3066×1120 ×1710mm(L*W*H)
Weight: 3280kg

2. Soundproof Version:



Soundproof Type
Overall size: 3600× 1500× 2120mm(L*W*H)
Weight: 4000kg