



DATA SHEET

The power for the better life

DIESEL GENERATOR SET
50Hz/1500 rpm

MODEL: VG650-ICS



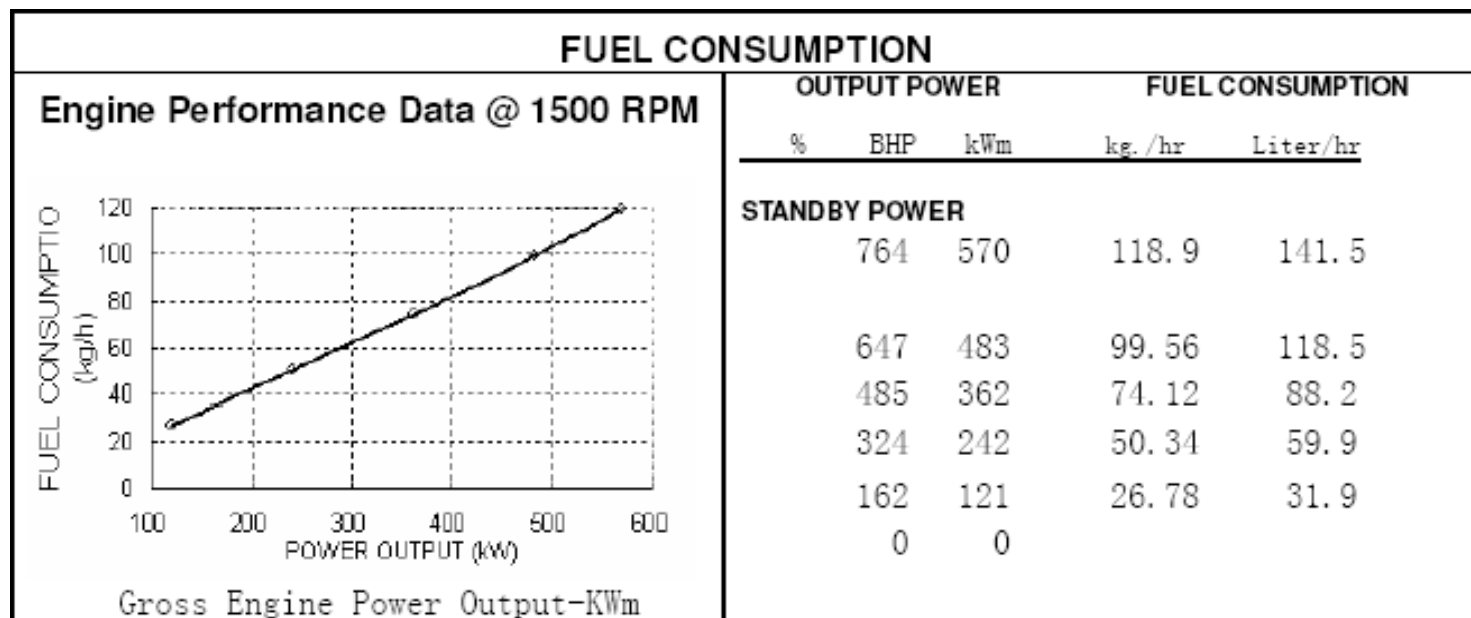
Genset Model	VG650-ICS
Prime Power(50HZ)	460KW / 575KVA
Standby Power(50HZ)	520KW / 650KVA
Frequency/Speed	50Hz/1500rpm
Standard Voltage	230V/400V
Phases	Three phases, four wires
Manufacturer	Vega Power International PTE.LTD

- ◆ 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	KTAA19-G6
Engine speed	1500rpm
Engine power	
-----Standby power	570kw /764HP
-----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	13.5:1
Idle speed	675 – 775 r/min
Brake mean effective pressure(standby power)	2404kPa
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

Air induction

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	23L
-----With heat exchanger	53 L
-----With explanation tank & LTA	112 L
Standard thermostat(modulating) range	82-93 °C
Max. coolant temperature	96.1 °C
Max. allowable top tank temperature 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	Prime power
Governed Engine Speed.....RPM	1500RPM	1500RPM
Engine Idle Speed.....RPM	725-775	725-775
Gross Engine Power Output.....KW	570	520
Friction Horsepower.....KW	40	40
Engine Water Flow to Engine.....Litre/sec		
Intake Air Flow.....Litre/sec	703	623
Exhaust Gas Flow.....Litre/sec	1985	1860
Exhaust Gas Temperature...°C	457	433
Heat Rejection to Ambient/min(KW)	82	74
Heat Rejection to Coolant.....KW	408	372
Heat Radiation.....KW		

Alternator Specifications:

Manufacturer	Cummins Generator Technologies(China) Co. Ltd
Model	HCI544E
Frequency	50HZ
Voltage	400V
Output power-----Continuous duty/40°C	600kVA / 480kW
-----Stand-by/27°C	660kVA / 528kW
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	Self Excited
AVR type	AS440
Voltage regulation	±0.5%
Waveform distortion	no load < 1.5% non-distorting balanced linear load <
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.
- ◆ 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

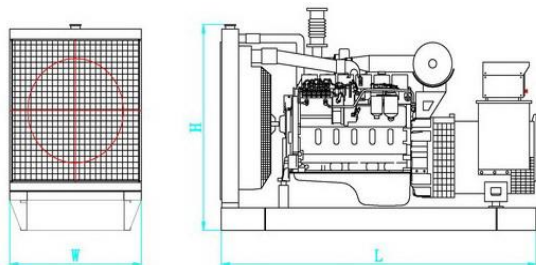
for expansion device connectivity.

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:

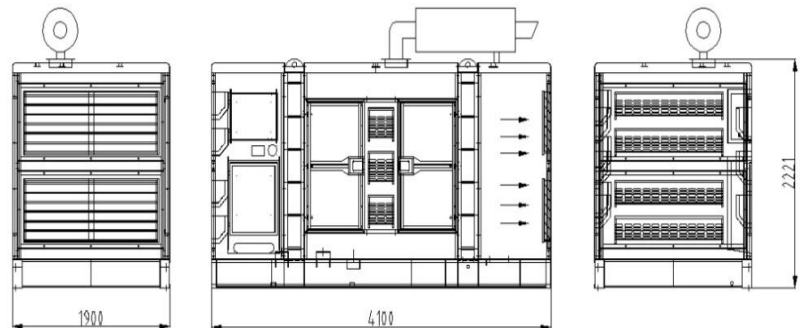


Open Type (Standard Configuration)

Overall Size: 3470 × 1550 × 2200mm(L*W*H)

Weight: 4350kg

2. Soundproof Version:



Soundproof Type

Overall size: 4200 × 1900 × 2420mm(L*W*H)

Weight: 5350kg