

DATA SHEET

DIESEL GENERATOR SET 50Hz/1500 rpm

The power for the better life

MODEL: VG450CS





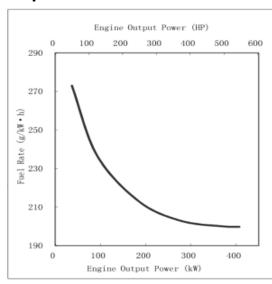
Genset Model	VG450CS
Prime Power	320KW / 400KVA
Standby Power	360KW / 450KVA
Frequency/Speed	50Hz/1500rpm
Standard Voltage	230V/400V
Phases	Three phases, four wires
Manufacturer	Vega Power International PTE.LTD

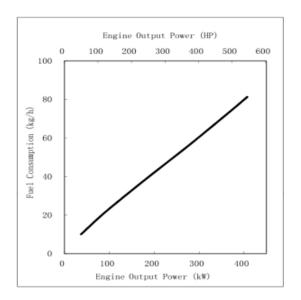
- ♦ Assembled by Cummins diesel engine and Stamford alternator.
- ♦ Three filters as standard, fuel and water separator as optional.
- ♦ Radiator and fan with safety guard.
- ♦ Single bearing alternator IP 23, Insulation Class H.
- ♦ Heavy duty steel as base frame and 8hrs operation base fuel tank.
- ♦ 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 Specification:

Manufacturer	Chongqing Cummins Engine Co. Ltd.	
Model	NTAA855-G7A	
Engine speed	1500rpm	
Engine power		
Standby power	407kw	
Prime power	370kw	
Aspiration	Turbo-charged and aftercooler	
Туре	4 cylce, in-line, 6 cylinder	
Bore * Stroke	140*152mm	
Displacement	141	
Compression ratio	14.0:1	
Idle speed	575-650 r/min	
Brake mean effictive pressure	2326kPa	
Piston speed	7.62 m/s	
Emission Certification	MEP STAGE I	
Friction energy output	22 kw	

Fuel Consumption:





	Output	Power	Fuel Con	sumption	Fuel Rate
	HP	kW	kg/h	L/h	g/kW-h
Standby100%	545	407	81.3	98.0	199.8
100%	495	370	74.0	89.2	200.0
75%	372	278	56.3	67.8	202.9
50%	248	185	39.4	47.5	213.0
25%	124	93	21.9	26.4	236.8
10%	50	37	10.1	12.2	273.0

Exhaust system:

Maximum Back Pressure	10kPa
Exhaust Pipe Size Normally Acceptable	127 mm

Lubrication system:

Minimum Engine Oil Pressure for Engine Protection Devices:		
Low idle	103 kPa	
Rated speed	241-345kPa	
Max. allowable oil temperature	121 °C	
Max.oil consumption	0,24l/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	Direct injection Cummins PT
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 capacityCCA	320
Cold soak(with Load)CCA	900
Min. reserved capacityCCA	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

Air induction system:

Maximum Intake Air Restriction with Heavy Duty Air Cleaner	
Clean Element	3.74kPa
Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner	53g/cfm
Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger	17 °C

Cooling system:

Coolant capacity – engine only	7.2L
Coolant capacity – with radiator	60,61
Coolant capacity – with heat exchanger	49,21
Standard Thermostat (Modulating) Range	82-94 °C
Max coolant temperature	96°C
Min recommended top tank temperature	71°C
Maximum Top Tank Temperature for Standby / Prime Power	104 / 100 °C

Alternator Specifications:

Manufacturer	Cummins Generator Technologies(China) Co. Ltd
Model	HCI444F
Frequency	50HZ
Voltage	230V/400V, 3phases
Output powerContinuous duty/40°C	400kVA / 320kW
Stand-by/27°C	450kVA /360kW
Phase	3 ph.
Power factor	P.F.=0.8
Insulation class	Н
Winding pitch	2/3 (N [°] 6)
Number of wires	12
Protection	IP23
Altitude	≤ 1000 m
Overspeed	2250 min ⁻¹
Excitation system	Shunt
AVR type	MX321
Voltage regulation	±0.5%
Short-circuit current	N/A
Total harmonics (THD)	no load < 1.5%
Wave form : NEMA = TIF	< 50
Air follow	1.1 m ³ /s
Bearing	Single
Relative humidity	≤ 95%

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

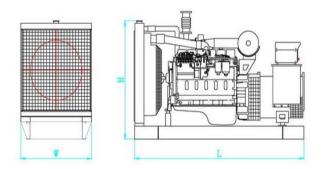
for expansion device connectivity.

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

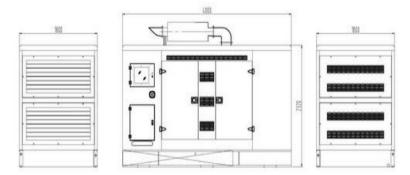
1.Open Version:



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

Weight: 3280kg

2. Soundproof Version:



Soundproof Type
Overall size: 3600×
1400×2100mm(L*W*H)

Weight: 3950kg

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