

625KVA Cummins Diesel Generator Set Datasheet



Model: KH-500GF
Engine: CUMMINS
Alternator: STAMFORD
Control Panel: UK DEEPSEA
Prime Power: 625KVA/500KW
Standby Power: 690KVA/500KW



Prime power is available for an unlimited number of annual hours in variable load applications, in accordance with GB/T2820-97. A 10% overload capability is available for a period of 1 hour within a 12-hour operation cycle.

The standby power rating is intended for supplying emergency power during utility power interruptions. No overload, utility parallel, or negotiated outage operation capabilities are available at this rating..

Standard Specification

Genset model	Voltage	Frequency	Phase	Power Factor	Protection Class	Insulation Grade
KH-500GF	240/415V	50HZ	3	0.8(lagging)	IP23	H

Engine and Genset Output Rating

Engine model	Engine Speed (RPM)	Prime (KW/HP)	Standby (KW/HP)	Genset Model	Prime (KVA/KW)	Standby (KVA/KW)
KTA19-G8A	1500	550/737	610/817	KH-500GF	625/500	690/550

Scope Of Supply

Engine:	CUMMINS
Alternator:	STAMFORD
Controller:	Automatic controller DSE7320MKII with AMF function
Breaker:	Manual circuit breaker 3-pole, China CHNT
Radiator:	Cummins 50°C
Vibration:	Vibration damper between engine/alternator and base frame
Base:	Heavy duty steel channel base frame
Silencer:	Heavy duty industrial type silencer with flexible bellow,elbow
Battery:	High capacity sealed free maintenance battery C/W battery cables
Manuals:	Standard tools, operator's manual of engine ,alternator , controller, breaker

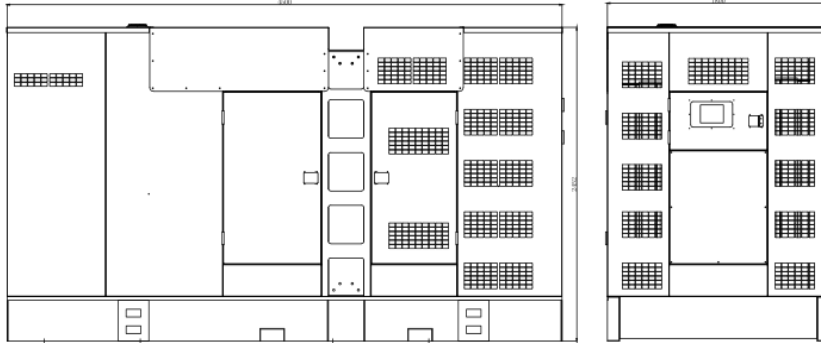
Optional

Sound Attenuated Enclosure	Oil/ Water/Fuel Heating system	Anti condensation heater
Heater Preservation Cabinet	Automatic Transfer Switch (ATS)	Daily Fuel Tank
Rainproof Enclosure	Remote Control System	Output Cable
Sound Attenuated Container (20GP/20HC/40HC)	Synchronisation System	Maintainance Spare Parts
Trailer (10-500KVA)	Breaker brand (ABB,Simens,Schneider,LS)	Plywood Case Packing

4.DIMENSIONS(L*W*H) And Weight

PROCESS FLOW:Drawing→Cutting→Bending→Welding→Spraying→Assembling→Testing

Open Type	3720kG	Silent Type	5300KG
	3420*1250*1930mm		4800*1800*2550mm



Sound Attenuated Enclosure

IP rated sound attenuated weatherproof enclosure designed for rugged conditions

Excellent security: The totally-enclosure is manufactured from 2 mm high quality galvanized cold-rolled steel plates.

Ventilation: combined combustion and ventilation cooling.

Excellent sound attenuation, with anti-drumming treatment which effectively lowers the sectional noise during normal running of the gen-sets.

The enclosure uses high frequency, medium frequency and low frequency type of PUR anti-flaming and sound-absorbing cotton, which could reduce the noise produced by the genset.

The door uses an EPDM type sealing system.

High efficiency absorptive mufflers which helps reduce exhaust noise.

Convenient transport using four point lifting arrangement.



Warranty

Warranty is according to our standard conditions:12 months or 1,000 running hours, subject to the earlier one (artificial damage to be an exception).

Certifications

European Safety Standard: CE Certificate

ISO9001:2015 Quality Control System

CUMMINS OEM CERTIFICATE

STAMFORD OEM CERTIFICATE

Cummins Diesel Engine

Engine Brand	Cummins	
Engine Manufacturer	Chongqing Cummins Engine Company Ltd	
Engine Model	KTA19-G8A	
Engine Rated Power	550KW @1500RPM	
Cylinder Arrangement	6 in line	
Cycle	Four stroke	
Aspiration	Turbocharged , Aftercooled	
Fuel System	Cummins PT	

BorexStroke (mmxmm)	159x159	
Displacement(L)	19	
Compression Ratio	13.0:1	
Speed Governor	Electronic	
Cooling System	Forced Water Cooling Cycle	
Starter Motor	DC24V electrical starting	
Exhaust System		
Exhaust Gas Flow (l/s)	3757	
Exhaust Temperature(°C)		
Standby Power	550	
Prime Power	480	
Max Back Pressure(kPa)	10	
Air Intake System		
Max Intake Restriction(kPa)		
Clean Element	15	
Air Flow(l/s)	1345	
Fuel System		
Fuel tank capacity	1000L	
Type Injection System	Cummins PT	
110%(Standby Power) Load(L/H)	91.3	
100%(Prime Power) Load(L/H)	74.4	
75%(Prime Power) Load(L/H)	42.1	
50%(Prime Power) Load(L/H)	56.4	
25%(Prime Power) Load(L/H)	37.1	
Lubricating Oil System		
Maximum Oil Temperature(°C)	121	
Oil Pressure at Rated RPM	345-483	
Total System Capacity (L)	50	
Cooling System		
Coolant Capacity - Engine Only(L)	30	
Thermostat range(°C)	83-92	
Max Water Temperature Standby/Prime(°C)	104/100	
Specification of STAMFORD alternator		
Alternator Brand	Stamford	
Engine Manufacturer	Cummins GeneratorTechnologies (China) Co., Ltd	
Alternator Model	S5L1D-F4	STAMFORD®
Alternator Rated Power	670KVA/536KW	
Rated Voltage	415V	
Rated frequency	50HZ	
Connecting Type	3 Phase and 4 Wires	
Number of Bearing	1	
Protection Grade	IP23	
Altitude	≤1000m	

Exciter Type	Brushless ,Self-exciting, AVR automatic voltage regulating,100% Copper winding wire
Insulation Class	H
Telephone Influence Factor (TIF)	≤50
THF	≤2%
Voltage Regulation, Steady State	≤±1%
Transient State Voltage	≤-15%~+20%

Specification of control System (Deepsea DSE7320MKII Module)

The DSE7320 controller is an advanced control module based on a microprocessor. It functions as an Auto Mains (Utility) Failure Control Module (AMF) designed to start and stop generating sets that include both electronic and non-electronic engines. It also has the capability to monitor the mains (utility) supply. When the mains supply is unavailable, it can automatically start the engine and close the generator's breaker. It accurately measures various operational parameters and displays all values and alarm information on the LCD. Additionally, it can automatically open the breaker and shut down the engine once the mains supply is restored.

Main Features

- The system includes Auto Mains Failure (AMF) and Automatic Transfer Switch (ATS) functionalities, along with communication and expansion capabilities.
- It is designed to operate simultaneously with electronic, non-electronic, or gas engines, supporting a variety of engine ECUs.
- The device features selectable modes: Manual, Automatic, Test, and Remote Control.
- It monitors and measures the operational parameters of both the mains supply and the generator set (genset).
- It indicates the operational status, fault conditions, all parameters, and alarms.
- It features multiple protection mechanisms and displays various parameters.
- The system includes 12 inputs and 8 outputs, with 8 of the inputs and 4 of the outputs being configurable.
- Has 4 analog inputs for optional sensors that can measure oil pressure, coolant temperature, fuel level, and more; the parameters are user-configurable.
- It can be programmed either via the front panel or using PC software.
- Supports twelve languages, with the option for customers to edit the languages.
- Features graded protection with options for pre-alarm, shutdown, and electrical trip, all with flexible settings.
- The module can be pre-set for four operating modes and protective parameters.
- The firmware can be updated automatically, ensuring the customer always has the latest version.

Key Features

- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility Internal PLC editor
- Protections disable feature Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)



kW and kvar overload and reverse power alarms
Over current protection
Unbalanced load protection
Independent earth fault protection Breaker control via fascia buttons
Fuel and start outputs configurable when using CAN
6 configurable DC outputs
2 configurable volt-free relay outputs
6 configurable analogue/digital inputs
Support for 0 V to 10 V & 4 mA to 20 mA sensors
8 configurable digital inputs
Configurable 5 stage dummy load and load shedding outputs
CAN, MPU and alternator frequency speed sensing in one variant
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Manual and automatic fuel pump control
Engine pre-heat and post-heat functions
Engine run-time scheduler
Engine idle control for starting & stopping
Fuel usage monitor and low fuel level alarms
Simultaneous use of RS232 and RS485 communication ports
True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
MODBUS RTU support with configurable MODBUS pages.
Advanced SMS messaging (additional external modem required)
Start & stop capability via SMS messaging
3 configurable maintenance alarms
Compatible with a wide range of CAN engines, including tier 4 engine support
Uses DSE Configuration Suite PC Software for simplified configuration
Licence-free PC software
IP65 rating (with supplied gasket) offers increased resistance to water ingress
Modules can be integrated into building management systems (BMS) using MODBUS RTU

Key Benefits

Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
The hours counter accurately tracks runtime, helping users schedule maintenance and ensure timely servicing.
The user-friendly setup and intuitive button layout ensure easy operation and quick access to functions.
Multiple parameters are monitored and displayed at the same time for complete visibility
The module is configurable to accommodate various applications, offering user flexibility.
The PLC editor enables users to configure functions tailored to specific application needs.