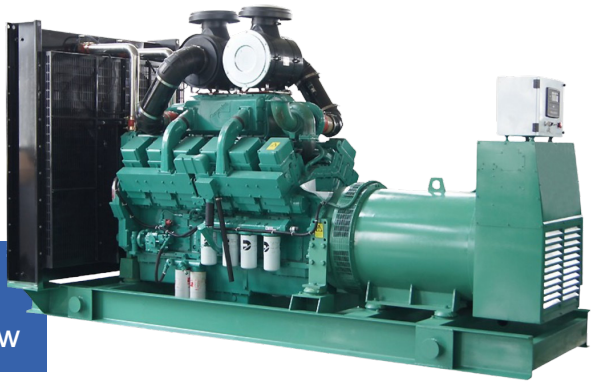
BOROKO MOTORS POWER SYSTEMS

800KVA CUMMINS DIESEL GENERATOR SET



Model:KH-640GF
Engine: CUMMINS
Alternator: STAMFORD
Control Panel: UK DEEPSEA
Prime Power:800KVA/640KW
Standby Power:880KVA/704KW

CE ISO 9001

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	KH-640GF
Voltage	240/415V
Frequency	50HZ
Phase	3
Power Factory	0.8(lagging)
Protection Class	IP23
Insulation Grade	H

Engine and genset output rating	
Engine model	KTA38-G2B
Engine Speed (RPM)	1500
Prime (KW/HP)	711/953
Standby (KW/HP)	789/1057
Genset Model	KH-640GF
Prime (KVA/KW)	800/640
Standby (KVA/KW)	880/704

Scope of standard 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 installed between the engine/alternator and the 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.

Optionals	
Sound attenuated enclosure	Synchronisation system
Heater preservation cabinet	Breaker brand (ABB,Simens,Schneider,LS)
Rainproof cabinet	Anti condensation heater
Sound Attenuated Container (20GP/20HC/40HC)	Daily fuel tank
Trailer (10-500KVA)	Output cable
Oil/ Water/Fuel heating system	Maintenance spare parts
Automatic Transfer Switch (ATS)	Plywood case packing
Remote control system	

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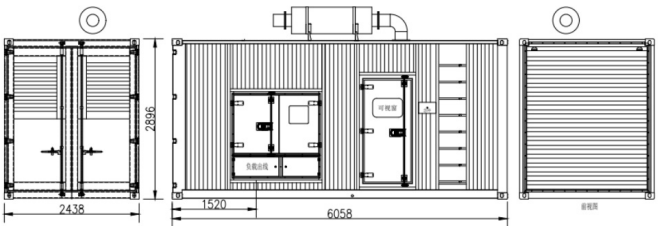
DIMENSIONS(L*W*H) and Weight

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

Open Type	9600kG
	5000*2000*2450mm
Silent Type	12400KG
	6058*2438*2896mm



Sound Attenuated Container

The entire container genset can be shipped as an international standard container, significantly reducing transportation costs (certificates can be provided).

The diesel genset, power switch cabinet, control system, and 6–8 hour fuel tank are fixed inside the container.

There are two explosive-proof lamps installed in the roof of the container and one above the control panel for user convenience

Both the front and back doors of the container can be opened. Each side is also equipped with doors for user operation and maintenance, and there are ladders outside the container.

All hinges, locks, and bolts are made of stainless steel. The container installation is designed to protect against water ingress.

The control panel and output cabinet are located on the same side of the container for convenient daily operation and power cable connections.

Anti vibration mounts are installed between the engine and base frame to reduce noise and vibration during genset operation.

The advanced ventilation system effectively allows heat generated during genset operation to escape from the canopy.

The control space is designed to ensure ease repair and maintenance while working within inside the container.

The absorbative & reactive silencer significantly reduces noise generated by the exhaust.

Sound Attenuated Container

The output terminal is located inside an output box fixed to the container, allowing users to connect cables directly from outside.

The soundproof container-type power generator utilises advanced sound-absorbing technology. The polymer materials combine sound wave reflection and absorption techniques, converting sound energy into heat energy, which is then expelled from the container through the ventilation system. Additionally, the soundproofing doors feature double-layered glass windows with perfect sealing along the doors and windows to prevent sound from escaping.

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).

Certification

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	KTA38-G2B
Engine Rated Power	711KW @1500RPM
Cylinder Arrangement	12 in line
Cycle	Four stroke
Aspiration	Turbocharged , Aftercooled
Fuel System	Cummins PT
Bore×Stroke (mm×mm)	159x159
Displacement(L)	37.8
Compression Ratio	14.5:1
Speed Governor	Electronic
Cooling System	Forced Water Cooling Cycle
Starter Motor	DC24V electrical starting

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Exhaust System	
Exhaust Gas Flow (l/s)	2251
Exhaust Temperature(°C)	541
Standby Power	470
Prime Power	477
Max Back Pressure(kPa)	10

Air Intake System	
Max Intake Restriction (kPa)	3.73 (Clean Element)
Clean Element	2.49
Air Flow(l/s)	926

Fuel System	
Type Injection System	Cummins PT
100%(Prime Power) Load(L/H)	164.4L/H

Oil System	
Maximum Oil Temperature(°C)	121
Oil Pressure at Rated RPM(kPA)	296-483
Total System Capacity (L)	135

Cooling System	
Coolant Capacity – Engine Only(L)	118
Thermostat range(°C)	82-94
Max Water Temperature Standby/ Prime(°C)	104/100

Specification of STAMFORD Alternator	STAMFORD
Alternator Brand	Stamford
Engine Manufacturer	Cummins GeneratorTechnologies (China) Co., Ltd
Alternator Model	S6L1D-C4
Alternator Rated Power	810KVA/648KW
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

Specification of STAMFORD Alternator	STAMFORD
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.

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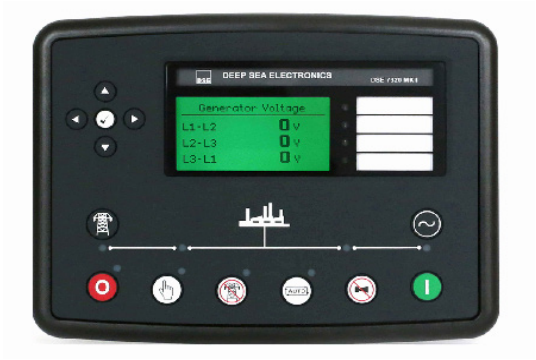
Key Features

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.

Key Features

- 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.
- 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.