



# Cummins Diesel Generator Set Model No.: BCSS220

### Standby Power 220KW/275KVA



#### **GUANGDONG BINSHI POWER TECHNOLOGY CO., LTD.**

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#### Powered by

Cummins: NT855-GA

#### Standby 275KVA at 50Hz, 400V



## Genset Technical Data:

Genset Model:	BCSS220
Prime Power:	200 KW /250KVA
Standby Power:	220 KW / 275KVA
Frequency/Speed:	50Hz/1500rpm
Rated Voltage:	400V
Power Factor:	0.8
Oil tank:	400 L
Phase:	three-phases, four-wires
Fuel consumption:	53L/h
Engine:	Cummins
Alternator:	Stamford
Controller:	DeepSea
Dimensions (LxWxH):	2900×1000×1600 mm
Net Weight:	3100 kgs

(1) PRP: Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation. In accordance with ISO 3046-1.

(2) ESP: The Standby Power Rating is applicable for supplying emergency power in variable load applications for up to 200 hours per year in accordance with ISO8528-1. Overload is not allowed.

### Advantages:

- 1. Unique engine injection pressure and construction: Unique Cummins fuel system, 4 valves per cylinder, direct injection, turbocharged & intercooled.
- 2. Advanced production technology: higher strengthen and reliability because of alloy cast iron cylinder body & cover and complete equilibrium structure crankshaft.
- **3.** Advanced electrical control technology: full control system design, use advanced ECU intelligent control patch, with real-time monitoring for engine. With fault reserve function.
- 4. High operating reliability: high strength cast cylinder and crankcase provide solid crankshaft support and reduce weight. The engine has enough safety power reserve to cope with 50% over-speed.
- 5. Economy:
- 1) The engine set consumes less fuel and oil, so the operating costs are low, fuel consumption rate is 195-2D8 g / kWh.
- 2) With the world's longest working time before first overhaul.

# Cummins Engine

Model: NT855-GA

Manufacture: CCEC, China

### General features:

- Water cooled, turbocharged & intercooled.
- Direct injection fuel system
- 24V D.C starter
- Cooling radiator and fan with safety guard.
- Replaceable fuel filter, oil filter and dry element air filter.
- Fuel and water separator as optional.

### Main Technical Data:

Prime/standby power:	231KW / 254KW	
Rated Voltage:	400V	
Frequency/Speed:	50Hz/1500rpm	
Cylinders no. & Type:	6 cylinders in line, 4 cycle	
Aspiration:	Turbocharging	
Bore × Stroke:	140×152mm	
Displacement:	14L	
Compression ratio:	15: 1	

### Exhaust System

Max. back pressure	10kPa
Diameter of exhaust pipe recommended	127mm

## Air Intake System

Max. air intake resistance	
Dirty filter	6.22kPa
Normal air cleaner and clean filter	3.74kPa





Minimum Dirt Holding Capacity	53 g/L/s
Maximum Allowable Intake Air Temperature	17°C

## Lubrication System

Oil pressure	
Low idle speed	103KPa
Rated speed	241-345 KPa
Max. oil temperature permitted in oil pan	<b>121</b> ℃
Oil pan capacity (Max/Min)	36/28.4L
Total System Capacity	38.6L
Angularity of Oil Pan	38°

## Fuel System

Fuel injection pump model	Direct Injection Cummins PT
Maximum Fuel Pump Supply	232L
Maximum Fuel Temperature	71℃

## Cooling System

Coolant capacity-engine only	20.8L
Max. coolant cycling resistance exterior engine	41kPa
Thermostat adjusting temperature (range)	<b>82-94</b> ℃
Min. opening pressure of radiator cap	48.2KPa
Max. coolant temperature permitted(Standby /Base output Power)	<b>104/100</b> ℃

## Electric System

Starter	24V
Battery charging system	35A
Max. starting circuit resistance	0.002Ω
Min. battery capacity12 $^{\circ}$ (CCA: Cold Cranking Ampere)	900CCA

## Dimension & Weight

Dimensions (LxWxH):	1981× 933× 1597mm
Weight	1270kg

# Stamford Alternator

Model: GR270K

#### Origin: Shanghai, China

### **General Features:**

- Meet word-leading alternator standard requirement
- Self-excited control, provide continuous short-circuit current capacity
- H insulation grade can meet the requirements at hostile environment
- 2/3 winding pitch can restrain overmuch neutral current
- 12 stator leading-out terminal can be reconnected
- Single bearing or double bearings structure
- Easy installation and maintenance
- Standard protection class IP23

### Main Technical Data:

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Prime power:	200KW/250KVA		
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Standby power:	212KW/265KVA		
Rated Voltage:	400V / 380V		
Frequency/Speed:	50Hz/1500rpm		
Power Factor:	0.8		
Efficiency:	92.7%		
Design:	Brushless single bearing, revolving field		
Regulator:	AVR self-regulation		
Stator:	2/3 winding pitch		
Rotor:	Single bearing, flexible disc		
Exciter Type:	Brushless excitation		
Windings:	100% copper		
Stabilized voltage regulation	±0.5%		
Overspeed:	2250min		
Indication of protection:	IP23		
Insulation class	Н		
Short-circuit current capacity	300%(3 multiples): 10		
Dimensions (LxWxH):	117×64×99 mm		
Weight	740kg		



## DeepSea Control System

Model: DSE7320

Origin: Shanghai, China



### **Operating Environment:**

Operating temperature:	-20℃~60℃
Relative humidity:	95%
Operating voltage:	DC24V(range: 18-30V, withstand voltage: 50V/5mm)

### **General Features:**

- Compact size, reliable performance, easy to operation.
- Automatic detection function and multi-protection function, protect the generator operating safety and steady.
- Multi-interface display generator's working and alarm condition, visualized and clear to watch.
- Microcomputer control panel: set parameters such as input, output, alarm and time delay.
- Multiple operating modes: maintenance mode, manual mode and automatic mode.
- Start automatically when main supply is abnormal (over-tension, voltage too low, voltage loss).
- LCD can show all the parameters for the diesel generator.
- Protective cutoff function when the generator set failed.
- LCD alarm display, sound-light alarm control output.
- Manual/automatic/three-remotes function and electric supply/generate electricity automatic switch on-off control.
- Support RS232/RS485 communication mode (MODBUS protocol).

#### **Protection:**

- High/low voltage & frequency.
- Revolving speed lack of /exceed.
- Low oil pressure.
- High water temperature.
- Over current/ short trouble, emergency stop



# DeepSea Paralleling Module (Optional)

#### Full Automatic Paralleling Control Cabinet

- Self-starting, safety protection, alarm.
- It can realize parallel operation by manual or automatic.
- Self-load distribution.
- Self- reactive power distribution.
- Self-put into or logout gen-set per load.
- It can at most control 16 sets gen-set parallel operation.
- Provide open type MODBUS protocol, RS232 and RS485 communication interface for monitoring function.
- It has manual, automatic, three-remote function, monitor by computer to reach three – remote.



#### Features:

- Sheet steel lockable enclosure with hinged door,
- Removable base gland plate for cable entry/exit on all ratings
- Voltmeter (0-500) across L1-L2 on load output
- Load transfer push buttons
- 22.5mm multi-head LED indicators for "mains on load" and "generator on load"
- Interface to BS Power generator control panel
- Suitably rated earth bar

#### **Protection:**

- High/low voltage & frequency.
- Revolving speed lack of /exceed.
- Low oil pressure.
- High water temperature.
- Over current/ short trouble, emergency stop

## **Circuit Breaker**

Brand:	Mingyang
Capacity:	400A



# Genset Outlook



## Standard Supply Scope:

- Drive fan for engine and 40°C heat radiating water tank.
- Moulded case circuit breaker
- Battery and battery cable
- Float battery charger
- Base frame with vibration isolator
- Daily fuel tank
- Exhaust elbow, exhaust bellows, exhaust muffler
- Fuel filter, oil filter, air filter
- Tool kits
- Plastic membrane packing
- English testing report, quality certificate, service manual and warranty card



### **Optional Supply Scope:**

- Water jacket pre-heater
- Fuel and water separator
- Fuel pre-heater
- External daily fuel tank
- ATS
- Synchronization system
- Standard container
- Rain-proof canopy
- Sound-proof canopy
- Trailer







# Binshi Sales Promise

- 1. **Pre-sales service:** Our professional engineers give reasonable suggestions about selection, room design to all the technical solutions.
- 2. **Selling service:** we provide the technical support for the genset installation, test, room noise reduction, dust pollution ect.
- 3. We have **24 hours Standby** after-sales engineers and sufficient original plant components system.
- 4. **Quality Warranty** is according to our standard conditions: 12 months from BL date or 1,000 running hours. (whichever comes first.)

