



# **Cummins Diesel Generator Set**

Model No.: BCSS220

Standby Power 220KW/275KVA



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#### **Powered by**

**Cummins: MTA11-G2** 

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:	57L/h
Engine:	Cummins
Alternator:	Stamford
Controller:	DeepSea
Dimensions (LxWxH):	2900×1000×1600 mm
Net Weight:	2800 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: MTA11-G2

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:	224KW/246KW
Rated Voltage:	400V
Frequency/Speed:	50Hz/1500rpm
Cylinders no. & Type:	6 cylinders in line, 4-cycle
Aspiration:	Turbocharging and Air to Water intercooling
Bore × Stroke:	125×147mm
Displacement:	10.8 L
Compression ratio:	16.1: 1

### Exhaust System

Max. back pressure	10 kPa
Maximum allowable static bending moment at exhaust outlet flange	27 N.m
Exhaust pipe size normally acceptable	102mm

### Air Intake System

Max. air intake resistanceDirty filter	6.2 kPa
Normal air cleaner and clean filter	2.5 kPa



# Cooling System

Coolant capacityengine only	12.9 L
Thermostat adjusting temperature (range)	<b>82-93</b> ℃
Maximum Coolant Friction Head External to Engine	34.5KPa
Maximum coolant temperature - engine out	
Standby	104℃
Prime	100℃
Minimum operating block coolant temperature	70℃
Maximum coolant pressure(exclusive of pressure cap; closed	
thermostat at maximum no load speed)	276 kPa

## Lubrication System

Oil pressureLow idle speed	69 kPa
Typical oil pressure range - warm engine	152-193 kPa
Lubrication system capacity (oil pan + oil filter)	39 L
Maximum lube oil flow to all accessories	8 L/min

# Fuel System

Fuel injection pump model	Cummins PT-STC
Minimum fuel tank venting requiremen	850 L/H
Maximum Fuel Inlet Temperature	<b>71</b> ℃

# Electric System

Starter	24V
Battery charging system	35A
Max. starting circuit resistance	0.002Ω
Min. battery capacity -18 °C to 0 °C (CCA: Cold Cranking Ampere)	900CCA



# 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



Prime power:	200KW/250KVA
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.)

