



## Cummins Diesel Generator Set Model No.: BCM220

Standby Power 220KW/275KVA



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

Add: Shangtun industrial district, Liaobu Town, Dongguan City, Guangdong, China Tel: 0769-88992216 Fax: 0769-82310548 www.bs-power.com



#### Powered by

Cummins: NT855-GA

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



## Genset Technical Data:

|                     | 201100                   |
|---------------------|--------------------------|
| Genset Model:       | BCM220                   |
| 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:         | Marathon                 |
| 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            |



## Marathon Alternator

Model: MP-200-4A

#### Origin: Shanghai, China

### **General Features:**

- Brushless, self-exciting ۲
- AC excitation, rotating rectification tube ٠
- Class 'H' insulation ٠
- Stator grease insulation covered ۲
- Automatic Voltage Regulator Self regulating ٠
- Rotator and excitation high polymer ٠
- With fan cooling ۲

Weight

- Resist the corruption of oil and acid. ٠
- Resist humid grease ۲
- High-quality lubrication sealed long-time bearing ٠

### Ма

| ain Technical Data:              |   |
|----------------------------------|---|
| Prime power                      | 200KW                                     |
| Rated Voltage:                   | 400V                                      |
| Frequency/Speed:                 | 50Hz/1500rpm                              |
| Power Factor:                    | 0.8                                       |
| Efficiency:                      | 90.9%                                     |
| 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                               |
| Voltage regulation:              | ≥±10%                                     |
| Short-circuit current:           | 300% (3in) 10S                            |
| Overspeed:                       | 2250min-1                                 |
| Indication of protection:        | IP21/IP23                                 |
| Insulation class                 | н   |
| Total Harmonic Distortion:       | No load <5%.                              |
| Telephone Influence Factor(TIF): | <50                                       |
| Telephone Harmonic Factor(THF):  | <2%                                       |
| Dimensions (LxWxH):              | 997×603×855mm                             |

725kg





## 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.)

