宾士动力
BS POWER

GB/T9001-2008 idt ISO9001:2008
GB/T24001-2004 idt ISO14001:2004

# Cummins Diesel Generator Set

## Model No.：BCSS22

## Standby Power 22KW/28KVA

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## Powered by

## Cummins: 4B3.9-G1

## Standby 28KVA at 50Hz, 400V

# Genset Technical Data:

| | |
|---|---|
| **Genset Model:** | BCSS22 |
| **Prime Power:** | 20KW / 25KVA |
| **Standby Power:** | 22 KW / 28KVA |
| **Frequency/Speed:** | 50Hz/1500rpm |
| **Rated Voltage:** | 400V |
| **Power Factor:** | 0.8 |
| **Fuel consumption (100% load)：** | 7.1 L/h |
| **Oil tank:** | 200 L |
| **Phase:** | three-phases, four-wires |
| **Engine:** | Cummins |
| **Alternator:** | Stamford |
| **Controller:** | DeepSea |
| **Dimensions (LxWxH):** | 1750×700×1100mm |
| **Net Weight:** | 830kgs |

(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: 4B3.9-G1**

**Manufacture: DCEC, 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:** | 24KW / 27KW |
| **Rated Voltage:** | 400V |
| **Frequency/Speed:** | 50Hz/1500rpm |
| **Cylinders no. & Type:** | 4 cylinders in line, 4 cycle |
| **Aspiration:** | Natural Aspiration |
| **Bore × Stroke:** | 102×120mm |
| **Displacement:** | 3.9L |
| **Compression ratio:** | 18：1 |

## Exhaust System

| | |
|---|---|
| **Max. back pressure** | 10.1kPa |
| **Diameter of exhaust pipe recommended** | 75mm |

## Air Intake System

| | |
|---|---|
| **Max. air intake resistance** | |
| **--Dirty filter** | 5.0KPa |
| **--Normal air cleaner and clean filter** | 2.5KPa |

| | |
|---|---|
| **--Heavy duty cleaner and clean filter** | 3.0KPa |
| **Standard intake pipe diameter** | 75mm |

# Lubrication System

| | |
|---|---|
| **Oil pressure** | |
| **----Low idle speed** | 207KPa |
| **----Rated speed** | 345 KPa |
| **Max. oil temperature permitted in oil pan** | 121℃ |
| **Oil pan capacity (Max/Min)** | 9.5/8.5L |
| **Lubrication system Min. capacity (oil pan + oil filter)** | 10.9L |
| **Usage inclining degree permitted (any direction)** | 40° |

# Fuel System

| | |
|---|---|
| **Fuel injection pump model** | BYC A Pump with RSV mechanical governor |
| **Maximum fuel return flow** | 30L/H |

# Cooling System

| | |
|---|---|
| **Coolant capacity-engine only** | 7.2L |
| **Max. coolant cycling resistance exterior engine** | 28KPa |
| **Thermostat adjusting temperature (range)** | 82-95℃ |
| **Min. opening pressure of radiator cap** | 69KPa |
| **Max. coolant temperature permitted(Standby /Base output Power)** | 104/100℃ |

# Electric System

| | |
|---|---|
| **Starter** | 24V |
| **Battery charging system** | 40A |
| **Max. starting circuit resistance** | 0.002Ω |
| **Min. battery capacity_ -12℃ (CCA：Cold Cranking Ampere)** | 312CCA |

# Dimension & Weight

| | |
|---|---|
| **Dimensions (LxWxH):** | 860×750×930mm |
| **Weight** | 308kg |

# Stamford Alternator

## Model:GR180F

## 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 IP22
- Optional outlet box size

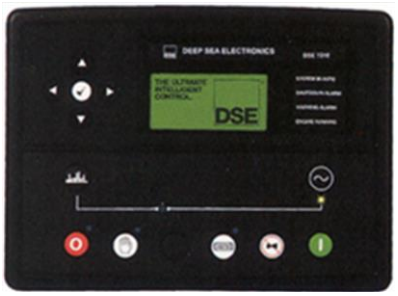
## Main Technical Data:

| | |
|---|---|
| **Prime power** | 22KW/27.5KVA |
| **Rated Voltage:** | 400V / 380v |
| **Frequency/Speed:** | 50Hz/1500rpm |
| **Power Factor:** | 0.8 |
| **Efficiency:** | 86.2% |
| **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:** | IP22 |
| **Insulation class** | H |
| **Short-circuit current capacity** | 300%(3 multiples)：10 |
| **Dimensions (LxWxH):** | 84x59x75 mm |
| **Weight** | 156kg |

# 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

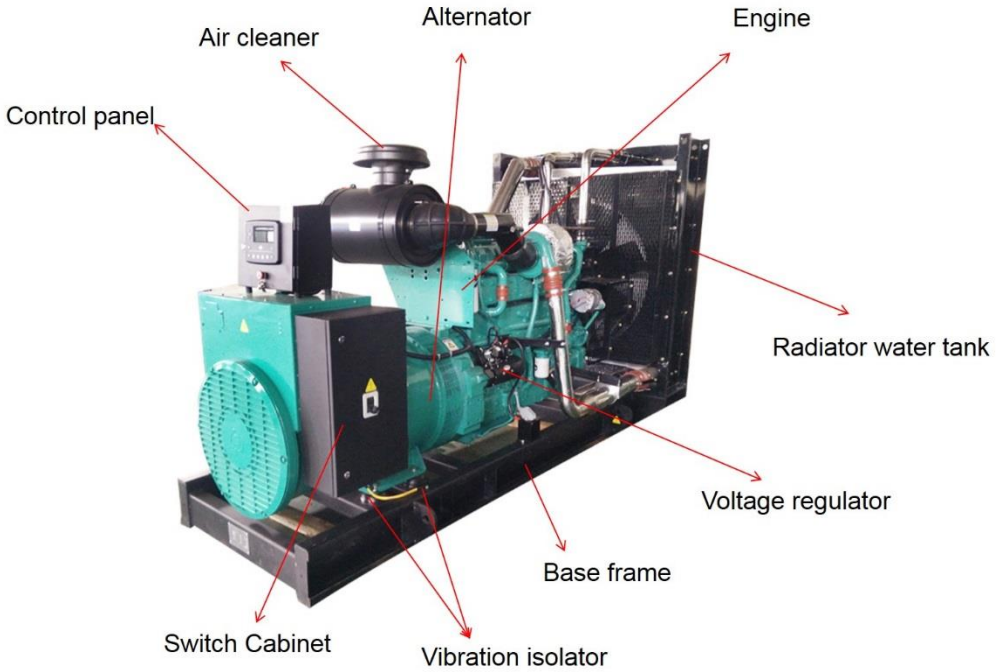
## Protection:

- 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:** | 40A |

# Genset Outlook



## Standard Supply Scope:

- Drive fan for engine and 40℃ 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.)