



宾士动力  
BS POWER

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



## Cummins Diesel Generator Set

Model No.: BCM22

Standby Power 22KW/28KVA



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**Powered by**

**Cummins: 4B3.9-G1**

**Standby 28KVA at 50Hz, 400V**



## Genset Technical Data:

<b>Genset Model:</b>	BCM22
<b>Prime Power:</b>	20KW / 25KVA
<b>Standby Power:</b>	22 KW / 28KVA
<b>Frequency/Speed:</b>	50Hz/1500rpm
<b>Rated Voltage:</b>	400V
<b>Power Factor:</b>	0.8
<b>Fuel consumption (100% load):</b>	7.1 L/h
<b>Oil tank:</b>	200 L
<b>Phase:</b>	three-phases, four-wires
<b>Engine:</b>	Cummins
<b>Alternator:</b>	Marathon
<b>Controller:</b>	DeepSea
<b>Dimensions (LxWxH):</b>	1750x700x1100mm
<b>Net Weight:</b>	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 strength 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:

<b>Prime/standby power:</b>	24KW / 27KW
<b>Rated Voltage:</b>	400V
<b>Frequency/Speed:</b>	50Hz/1500rpm
<b>Cylinders no. &amp; Type:</b>	4 cylinders in line, 4 cycle
<b>Aspiration:</b>	Natural Aspiration
<b>Bore x Stroke:</b>	102x120mm
<b>Displacement:</b>	3.9L
<b>Compression ratio:</b>	18: 1

## Exhaust System

<b>Max. back pressure</b>	10.1kPa
<b>Diameter of exhaust pipe recommended</b>	75mm

## Air Intake System

<b>Max. air intake resistance</b>	
--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

# Marathon Alternator

**Model: GM-20-4**

**Origin: Shanghai, China**

## General Features:

- ◆ Brushless, self-exciting
- ◆ AC excitation, rotating rectification tube
- ◆ Class 'H' insulation
- ◆ Stator grease insulation covered
- ◆ Automatic Voltage Regulator Self regulating
- ◆ Rotator and excitation high polymer
- ◆ With fan cooling
- ◆ Resist the corruption of oil and acid.
- ◆ Resist humid grease
- ◆ High-quality lubrication sealed long-time bearing



## Main Technical Data:

<b>Prime power</b>	20KW
<b>Rated Voltage:</b>	400V
<b>Frequency/Speed:</b>	50Hz/1500rpm
<b>Power Factor:</b>	0.8
<b>Efficiency:</b>	82.9%
<b>Design:</b>	Brushless single bearing, revolving field
<b>Regulator:</b>	AVR self-regulation
<b>Stator:</b>	2/3 winding pitch
<b>Rotor:</b>	Single bearing , flexible disc
<b>Exciter Type:</b>	Brushless excitation
<b>Windings:</b>	100% copper
<b>Voltage regulation:</b>	$\geq \pm 10\%$
<b>Short-circuit current:</b>	300% (3in) 10S
<b>Overspeed:</b>	2250min-1
<b>Indication of protection:</b>	IP21/IP23
<b>Insulation class</b>	H
<b>Total Harmonic Distortion:</b>	No load <5%.
<b>Telephone Influence Factor(TIF):</b>	<50
<b>Telephone Harmonic Factor(THF):</b>	<2%
<b>Dimensions (LxWxH):</b>	570x353x475mm
<b>Weight</b>	150kg

# DeepSea Control System

**Model: DSE7320**

**Origin: Shanghai, China**



## Operating Environment:

<b>Operating temperature:</b>	-20℃~60℃
<b>Relative humidity:</b>	95%
<b>Operating voltage:</b>	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

<b>Brand:</b>	Mingyang
<b>Capacity:</b>	40A

## 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.)

