



## **Cummins Diesel Generator Set**

Model No.: BCM300

Standby Power 300KW/375KVA



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#### **Powered by**

**Cummins: NTA855-G2A** 

Standby 375KVA at 50Hz, 400V



### Genset Technical Data:

Genset Model:	BCM300
Prime Power:	275 KW /344KVA
Standby Power:	300 KW / 375KVA
Frequency/Speed:	50Hz/1500rpm
Rated Voltage:	400V
Power Factor:	0.8
Fuel consumption:	71.9L/h
Oil tank:	600 L
Phase:	three-phases, four-wires
Engine:	Cummins
Alternator:	Marathon
Controller:	DeepSea
Dimensions (LxWxH):	3000×1000×1600 mm
Net Weight:	3400 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: NTA855-G2A

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:	312KW/343KW
Rated Voltage:	400V
Frequency/Speed:	50Hz/1500rpm
Cylinders no. & Type:	6 cylinders in line, 4-cycle
Aspiration:	Turbocharging, Water to Air intercooling
Bore × Stroke:	140×152mm
Displacement:	14 L
Compression ratio:	14: 1

### Exhaust System

Max. back pressure	10 kPa
Standard exhaust pipe diameter	127 mm

### Air Intake System

Max. air intake resistance	
Dirty filter	6.22 kPa
Normal air cleaner and clean filter	3.74 kPa
Minimum Dirt Holding Capacity	53 g/L/s
Maximum Allowable Intake Air Temperature	17°C



# Lubrication System

Oil pressure	
Low idle speed	103 kPa
Rated speed	241-345 kPa
Maximum Oil Consumption	0.24L/h
Max. oil temperature permitted in oil pan	<b>121</b> ℃
Oil pan capacity (Max/Min)	28.4/36 L
Lubrication system Min. capacity (oil pan + oil filter)	38.6 L
Usage inclining degree permitted (any direction)	38℃

# Fuel System

Fuel injection pump model	Direct injection Cummins PT
Maximum Fuel Pump Supply	314L/h
Fuel Rail Pressure	1407kPa
Maximum Fuel Temperature	71℃

# Cooling System

Coolant capacityengine only	20.8 L
With radiator	60.6 L
With Heat Exchanger	49.2 L
Max. coolant cycling resistance exterior engine	48 kPa
Thermostat adjusting temperature (range)	<b>82-94</b> ℃
Min. opening pressure of radiator cap	48.2 kPa
Max. coolant temperature permitted	96℃
Maximum Top Tank Temperature	100℃
Minimum Top Tank Temperature	<b>71</b> ℃

# Electric System

Starter	24V
Battery charging system	35A
Max. starting circuit resistance	0.002Ω
Min. battery capacity12℃ (CCA: Cold Cranking Ampere)	900CCA

# Dimension & Weight

Dimensions (LxWxH):	1880×783×1597mm
Weight	1300kg



# Marathon Alternator

Model: MP-280-4A

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:

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Prime power	280KW
Rated Voltage:	400V
Frequency/Speed:	50Hz/1500rpm
Power Factor:	0.8
Efficiency:	92.3%
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):	1038×603×855mm
Weight	880kg



# 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.
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# Circuit Breaker

Brand:	Mingyang
Capacity:	630A



# 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.)

