



# **Cummins Diesel Generator Set**

Model No.: BCSS375

Standby Power 375KW/469KVA



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#### **Powered by**

**Cummins: QSZ13-G2** 

Standby 469KVA at 50Hz, 400V



## Genset Technical Data:

Genset Model:	BCSS375
Prime Power:	350 KW /438KVA
Standby Power:	375 KW / 469KVA
Frequency/Speed:	50Hz/1500rpm
Rated Voltage:	400V
Power Factor:	0.8
Fuel consumption (100% load):	88.8 L/h
Oil tank:	800 L
Phase:	three-phases, four-wires
Engine:	Cummins
Alternator:	Stamford
Controller:	DeepSea
Dimensions (LxWxH):	3600×1250×2100 mm
Net Weight:	3700 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: QSZ13-G2

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:	400KW/440KW
Rated Voltage:	400V
Frequency/Speed:	50Hz/1500rpm
Cylinders no. & Type:	6 cylinders in line, 4-cycle
Aspiration:	Turbocharging and Air to Air intercooling
Bore × Stroke:	130×163mm
Displacement:	13 L
Compression ratio:	17: 1

## Air Intake System

Max. air intake resistanceDirty filter	6.2 kPa
Normal air cleaner and clean filter	3.2 kPa
Maximum temperature rise between	44.4%
ambient air and engine air inlet	11.1℃
MaximumTemperature Rise Between	30℃
Engine Air Inlet and Intake Manifold	30 C
Maximum Intake Manifold Temperature	85℃
Recommended whole air intake pipe size	200mm

#### Exhaust System

Max. back pressure	13 kPa
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Maximum allowable static bending moment at exhaust outlet flange	27 N.m
Exhaust pipe size normally acceptable	130mm

## Lubrication System

Oil pressureLow idle speed	82.7 kPa
Typical oil pressure range - warm engine	207-276 kPa
Lubrication system capacity (oil pan + oil filter)	45.42 L
Maximum lube oil flow to all accessories	7.57 L/min

## Cooling System

Coolant capacityengine only	23.1 L
Thermostat adjusting temperature (range)	<b>82-94</b> ℃
Maximum coolant temperature - engine out	102℃
Minimum operating block coolant temperature	<b>71</b> ℃
Coolant alarm temperature	107℃
Maximum coolant pressure(exclusive of pressure cap; closed	
thermostat at maximum no load speed)	407 kPa

## Fuel System

	Electronic control high pressure common
Fuel injection pump model	rail injection system
Minimum fuel tank venting requiremen	0.2 L/s
Maximum Fuel Inlet Temperature	<b>71</b> ℃
Maximum design fuel flow	204 kg/H

## 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

## Dimension & Weight

Dimensions (LxWxH):	1396 × 1049 × 1232 mm
Weight	1245 kg



## Stamford Alternator

Model: GR355C

Origin: Shanghai, China

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#### **General Features:**

- Advanced automatic voltage regulator control
- ♦ 2/3 winding pitch can restrain overmuch neutral current
- ♦ 12 stator leading-out terminal can be reconnected and can meet different voltage classes
- Single bearing or double bearings structure
- Easy installation and maintenance
- Standard maintenance-free sealed bearing
- ♦ Standard protection class IP23

## Main Technical Data:

	4001/31/1/5001/31/4
Prime power:	400KW/500KVA
Standby power:	410KW/512KVA
Rated Voltage:	400V / 380V
Frequency/Speed:	50Hz/1500rpm
Power Factor:	0.8
Efficiency:	93.8%
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): 10s
Dimensions (LxWxH):	170×95×116 mm
Weight	1250.5 kg



## 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:	700A



## 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.)

