

# AOSIF Cummins Series

## Product introduction

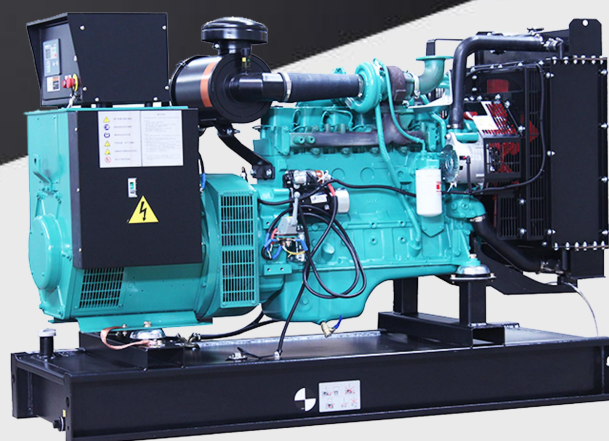
**AOSiF**  
POWER GENERATOR



## Model AC121 Generator set

# 110KVA/88KW

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**XIAMEN AOSIF ENGINEERING LTD.**

## General Performance Data

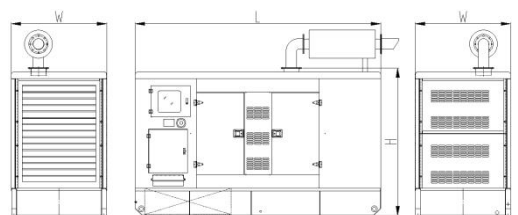
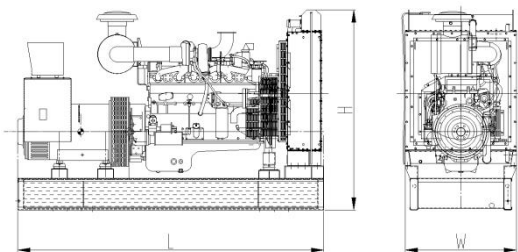
Prime Power	110KVA/88KW	Engine	Brand	Cummins
Stand by Power	121KVA/97KW		Model	6BTA5.9-G2
Frequency/Speed	50Hz/1500rpm	Control module	Deepsea 6120	
Rated Power Factor(cosφ)	0.8	Rated Current	166A	
Standard Voltage	230V/400V	Capacity of Breaker	225A	
Phases	3	Starting Voltage	DC24V	

## Fuel consumption

Rated output	Fuel consumption rate	
	212g/KW.h	30 L/h
100%Standby	212g/KW.h	30 L/h
100%Prime	211g/KW.h	27 L/h
75%Prime	212g/KW.h	20 L/h
50%Prime	219g/KW.h	14 L/h
25%Prime	248g/KW.h	8 L/h

## Standards followed

ISO9001	ISO14001
ISO8528	ISO12100
ISO13849	EN12601
GB12786	GB/T2820
IEC60034	IEC60204
CE	RETIE



## Dimensions and Weights

Type	Open	Silent
Length(mm)	2150	2950
Width(mm)	800	1100
Height(mm)	1450	1800
Weight(kg)	1200	1800
Base fuel tank volume (L)	210	210

## Engine specification

### Basic parameter

Manufacturer	dongfeng Cummins
Model	6BTA5.9-G2
No. of cylinder	6
Type	4 cycle, Vertical In-line
Prime Power	106kw /142HP
Standby Power	116kw /155HP
Induction system	Turbocharged & Aftercooled
Governor	Electronic speed
Bore x Stroke	102x120mm
Displacement	5.9L
Compression ratio	17.3:1
Oil Capacity(Total)	16.4L
Coolant Capacity(Engine only)	7.9L
Cranking Motor Voltage	DC24V

### Fuel System

Type Injection system	BYC Type A inline pump
Min. Allowable flow of fuel to fuel pump	30 L/h

### Lubrication system

Oil Pressure	
---Idle speed	207kPa
---Rated speed	345kPa
Max. allowable oil temperature	121°C
Offset sump oil capacity: low/high	14.2 /12.3L
Total system capacity	16.4L

### Air induction system

Maximum allowable intake air restriction	
---with clean filter element	3.7kPa
---with dirty filter element	6.2kPa

Intake Air alarm temperature	82°C
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### Exhaust system

Max. allowable back pressure	10kPa
Standard exhaust pipe diameter	75mm

### Cooling system

Coolant capacity	
---Engine only	7.9L
---Total system	23.8 L
---With heat exchanger	15.9L
Standard thermostat(modulating) range	82-95 °C
Minimum cap pressure	69kPa
Max. allowable top tank temerature for stand by/prime power	104/100 °C

### Electric system

Min. recommended battery capacity (24V)	
---10°C(50°F) & above- 0°F CCA	400
--- 0°C(32°F) to 10°C(50°F)- 0°F CCA	400
---18°C(0°F) to 0°C(32°F)- 0°F CCA	400
Max. allowable resistance of Starting circuit	0.002ohm
Starter(heave,Anode)	DC24V
Battery recharge system, negative ground	40ampere

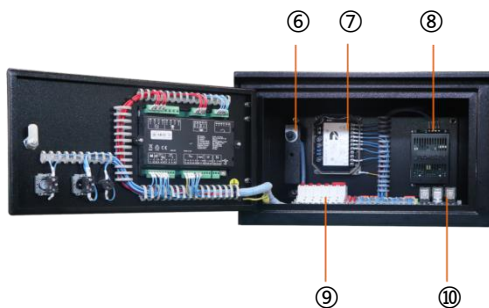
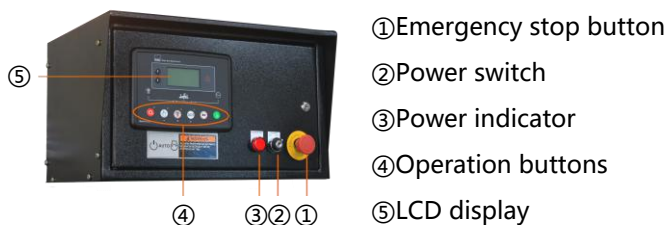
## Alternator specification

Phases	3	Coating	Vacuum impregnation
Poles	4	Insulation class	H
Power factor(cosφ)	0.8	Protection	IP23
Winding connection	Star	Excitation system	Self-excited
Winding pitch	2/3	Bearing	Single Bearing
Voltage regulator type	AVR	Coupling	Flexible disc

## Control system Introduction

### Deepsea 6120 Auto start & auto mains failure control panel

**Deepsea 6120** is an auto mains failure controller for single generator, it can monitor and protect the generator working all the time. it has a LCD display which clearly shows the status of the engine. this controller include seven inputs and six outputs. This controller can also be programmed using the front panel or by using DSE configuration Suite PC software



### Key Features:

- Auto start/stop, load transfer and alarming of generator
- Remote start on or off load
- With hierarchical loading function
- Multiple start/stop cycles can be preset
- 3 phase generator and mains voltage monitoring.
- Generator/load power detection(kW, kVA, kVA<sub>r</sub> PF)
- Overload protection (kW)
- Load current monitoring and protection
- Engine speed protection
- Engine pre-heat
- Engine start idle & stop idle
- Battery voltage monitoring
- Start under the low battery
- 4 active outputs
- 4 digital inputs and 3 analogue inputs.
- 6 Custom digital input
- 6 outputs(4 configurable on magnetic pick-up, 6 configurable on Canbus version)
- DSE2130,DSE2157,DSE2548 expansion module can be connected
- Support 0-10V or 4-20mA oil pressure sensor

### Main features:

- Multi language display
- Mains failure self starting
- The running time of the engine can be recorded to facilitate the maintenance and repair of the unit
- User-friendly set-up and button layout
- LCD display can display multiple parameters at the same time
- Support EFI engine
- IP65 rating (with optional gasket)
- PC and front panel configuration
- 100 event records
- Data recording and trend analysis

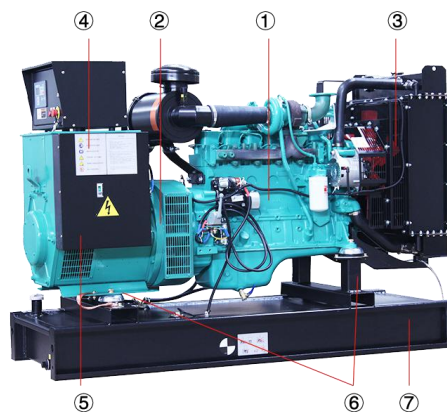
### Protection:

- Two sets of protection parameters can be preset
- Normal alarm, electrical trip and shutdown alarm can be set to effectively monitor the engine speed,oil pressure, water temperature and oil level, as well as the frequency, voltage, current and power of the alternator, for complete engine/alternator protection
- Low Oil Pressure
- High water Temperature
- High voltage and low voltage
- Overspeed
- Emergency stop
- Fail to start

## Decomposition diagram introduction of AOSiF Typical Canopy



### Standard supply scope:



- ① Engine
- ② AC Alternator
- ③ Cooling Radiator
- ④ Auto Start Control Panel
- ⑤ Main Circuit Breaker
- ⑥ Built in Shock Pad
- ⑦ High Strength Frame
- ⑧ Exhaust silencer
- ⑨ Bellow
- ⑩ Starting battery

### Optional supply scope:

Genset	Engine	Alternator	Control system
<ul style="list-style-type: none"> <li>• Tool box</li> <li>• Base fuel tank</li> <li>• External daily fuel tank</li> <li>• Trailer</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel heater</li> <li>• Fuel and water separator</li> </ul>	<ul style="list-style-type: none"> <li>• Temp. detector for winding and bearing</li> <li>• PMG</li> <li>• Antirust, mildew and salt fog treatment</li> <li>• Anti condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>• ATS</li> <li>• Synchronization System</li> <li>• Adjustable earth relay</li> </ul>
Breaker	Fuel system	Lub-oil system	Cooling system
<ul style="list-style-type: none"> <li>• ABB</li> <li>• Schneider</li> </ul>	<ul style="list-style-type: none"> <li>• Low fuel level alarm</li> <li>• Auto Fuel Pump</li> <li>• T Valve</li> </ul>	<ul style="list-style-type: none"> <li>• Lub oil heater</li> <li>• Temp.-sensor</li> <li>• Oil drain Pump</li> </ul>	<ul style="list-style-type: none"> <li>• Elec.coolant Heater</li> </ul>



# Our Promises

- AOSIF Engineering provides a full line of brand new and high quality products.
- Each unit passes strictly loading test in factory before shipment.
- Quality Warranty is provided strictly in accordance with warranty terms.
- Three level service guarantee: Aosif dealers, Service outlets of engine/alternator manufacturers, Aosif service team.



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