



Powered by

Cummins 6BTAA5.9-G2

135KVA at 50Hz, 400V

AOSIF Cummins Series Diesel Generator Set

Genset Model	A100
Prime Power(50HZ)	108KW / 135KVA
Standby Power(50HZ)	119KW / 150KVA
Frequency/Speed	50Hz/1500rpm
Voltage	230V/400V
Phases	Three phases, four wires
Manufacturer	Xiamen AOSIF Engineering Ltd.

(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.

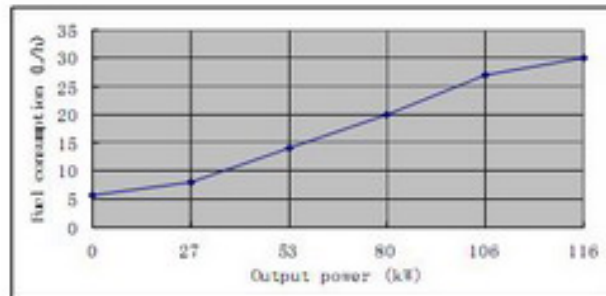
ENGINE DATA

Manufacturer	Dongfeng Cummins Engine Company Ltd.
Model	6BTAA5.9-G2
Engine speed	1500rpm
Engine power	
-----Standby power	130kw / 174HP
-----Base output power	120kw / 161HP
Air intake way	Air-air after-cooled, turbo-charged
Cylinder quantity	6
Bore * Stroke	102*120mm
Displacement	5.9L
Fuel system	PB pump_ electrical governor
Speed-droop	5%
Low idle	750-850 rpm
Piston speed	6.0 m/s

Friction energy output	12.7 kw
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Fuel Consumption

Output Power			Fuel consumption	
%	kW	HP	g/kW.h	L/h
Standby Power				
100	116	155	212	30
Base Output Power				
100	106	142	211	27
75	80	107	212	20
50	53	71	219	14
25	27	36	248	8
Continuous Power				
100	56	75	218	15



Exhaust system

Max. back pressure	76 mmHg
Diameter of exhaust pipe recommended	75mm
Exhaust flow (base output _ standby power)	293 _ 324 L/sec
Exhaust temperature (base output _ standby power)	481 _ 495 °C

Air intake system

Max. air intake resistance	
-----Dirty filter	635 mmH2O
-----Normal air cleaner and clean filter	254 mmH2O
-----Heavy duty cleaner and clean filter	381 mmH2O
Diameter of intake pipe recommended	100 mm
Air intake flow (base output _ standby power)	135 _ 145 L/sec

Lubrication system

Normal oil pressure range	
-----Low idle	207 kPa
-----Rated speed	345 kpa
Max. oil temperature permitted in oil pan	121 °C
Oil pan capacity (Max_ Min)	14.2 _ 12.3 L
Lubrication system Min. capacity (oil pan + oil filter)	16.4 L
Usage inclining degree permitted (any direction)	40 °

Fuel system

Fuel injection pump model	PB pump_ electrical governor
Max. fuel input resistance of transfer pump	102 mmHg
Max. overflow fuel resistance at overflow pipe of injector	254 mmHg
Total fuel overflow amount	30 L/h

Cooling system

Coolant capacity – engine only	9.9 L
Max. coolant cycling resistance exterior engine	28 kPa
Thermostat adjusting temperature (range)	82_95 °C
Min. opening pressure of radiator cap	69 kPa
Max. coolant temperature permitted(standby power_ Base output power)	104 _ 100 °C
Engine coolant flow (base output _ standby power)	2.0 _ 2.0 L/sec
Coolant energy output (base output _ standby power)	45 _ 50 kW

Electric system

Starter	12V	24V
Battery charging system	63A	40A
Max. starting circuit resistance	0.00075 Ω	0.002 Ω
Min. battery capacity_ -12°C (CCA: cold cranking Ampere)	800 CCA	400 CCA

ALTERNATOR SPECIFICATIONS
ALTERNATOR GENERAL DATA

Manufacturer / Model	Leroy-somer Electro-technique (Fuzhou) Company Ltd.
Model	LSA44.2 S75
Output power	108KW
AVR model	R250
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	≤ 1000 m
Overspeed	2250RPM
Number of Pole	4
Exciter type	Shunt
Insulation class	H
Voltage regulation	±0.5%
Sustained short circuit current	300% (3 IN) : 10s
Total harmonics (TGH/THC)	< 4 %
Wave form : NEMA = TIF	< 50
Wave form : I.E.C. = THF	< 2%
Bearing	single
Coupling	Direct

OTHER ALTERNATOR DATA

REACTANCES (%) - TIME CONSTANTS (ms): CLASS : H / 400 V

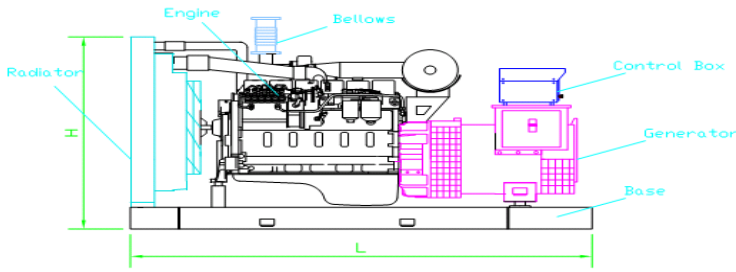
Kcc	Short-circuit ratio	0.31
Xd	Direct axis synchronous reactance unsaturated	392
Xq	Quadrature axis synchronous reactance unsaturated	235
T'do	Open circuit time constant	2734
X'd	Direct axis transient reactance saturated	14.3
T'd	Short circuit transient time constant	100
X''d	Direct axis subtransient reactance saturated	8.6
T''d	Subtransient time constant	10
X''q	Quadrature axis subtransient reactance saturated	10.3
Xo	Zero sequence reactance unsaturated	0.9
X2	Negative sequence reactance saturated	9.5
Ta	Armature time constant	15

OTHER DATA - CLASS : H / 400 V

io	No load excitation current (A) (SHUNT/AREP)	0,5/1
ic	Full load excitation current (A) (SHUNT/AREP)	2.1/4.2
uc	Full load excitation voltage (V) (SHUNT/AREP)	38/19
ms	Recovery time($\Delta U = 20\%$ trans.)	500
Kva(Shunt)	Motor start. ($\Delta U = 20\%$ sust.) or ($\Delta U = 50\%$ Trans)Shunt	246.4
Kva(AREP)	Motor start. ($\Delta U = 20\%$ sust.) or ($\Delta U = 50\%$ Trans)AREP	287.3
%	Transient dip (rated step load) SHUNT / PF : 0,8 LAG	17.5
%	Transient dip (rated step load) AREP / PF : 0,8 LAG	14.4
W	No load losses	1970

Dimension & Weight

Open Version

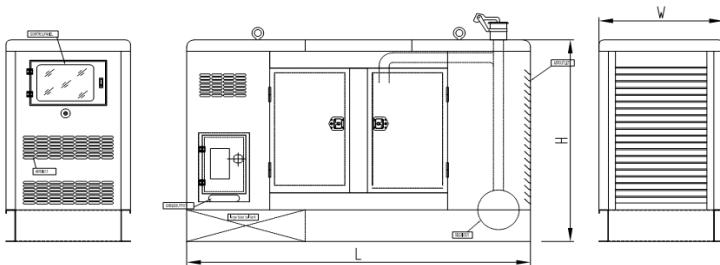


Open Type (Standard Configuration)

Overall Size: 2200×850 ×1400mm(L*W*H)

Weight: 1530kg

Soundproof Version



Soundproof Type

Overall size: 3100× 1100×1800mm(L*W*H)

Weight: 2000kg

Supply scope

1. Standard supply scope

Exhaust silencer	Flexible pipes	flange	Base frame	Main circuit breaker
Starting battery	Battery wires	Battery charger	Float battery charger	AVR
Cooling radiator	Wires diagram	manual books	Auto control panel	

2. Optional supply scope

Engine and radiator	Alternator part	Electrical part	Fuel Tank part	Others
Water preheater	PMG	ATS	External daily fuel tank	Silent canopy
Lub oil preheater	Anti-condensation heater	Synchronization panel	Automatic fuel pump	Weatherproof canopy
Spare parts	Parallel droop	ABB breaker	oil drain pump	Mobile Trailer

Sales Promises

- . AOSIF Engineering provides a full line of brand new and high quality products. Each and every unit is strictly factory tested before shipment.
- . Quality Warranty is according to our standard conditions: 12 months from BL date or 1,000 running hours, whichever comes first.
- . Service and parts are available from XIAMEN AOSIF Engineering Ltd. or distributors in your location.
- . All the products from Xiamen AOSIF Engineering Ltd. is CE marked.

Control Panel Specification

Reach 1.0 control panel is an automatic and intelligent control panel which is designed with an intuitive design and a big user friendly graphical display for various application. It can carry out functions including automatic start/stop, data measure and alarming. The controller uses LCD display, English display interface with operation easy and reliable.



Reach 1.0

Features:

- ◆ protection: Automatic start/stop, load transfer and alarming of generator;
- ◆ Three channel analog inputs, may joint with Resistive-type temperature/ pressure/ fuel level sensors, Several temperature and pressure sensors can be used directly (ie. VDO, DATCON, CUMMINS), also may select "user defined" sensor via entering 8 point curves;
- ◆ Display of generator cumulated electric energy;
- ◆ Security password-protected programming levels.
- ◆ Several crank success conditions are optional;
- ◆ Power supply range is wide, accommodating to different starting battery voltage environments;
- ◆ All parameters use digital modulation, abandoning analog modulation using conventional electronic potentiometer, reliability and stability are increased;
- ◆ Built-in watch dog can never be dead halt, ensuring smooth program execution;

Parameters:

Generator Volts, Amps, Frequency, active power, apparent power , power factor, Engine Oil Pressure, battery volt, Engine speed, engine temperature, Engine Hours Run, fuel level.

Protection:

- Low Oil Pressure
- High Engine Temperature
- High voltage and low voltage
- Overspeed
- Volt adjuster and frequency adjuster.
- Emergency stop
- Fail to start

AOSIF SOUNDPROOF ENCLOSURE SPECIFICATION

AOSIF silent generator is designed by professional acoustic engineers based on many years experience, Now we can make the noise of the generator less than 80-85dB(A) at 1m, or 70~75dB(A) at 7m, 60~65dB(A) at 15m.

High performance

- ★ multi-way air intake and exhaust guarantee the power performance of the generator.
- ★ large-scale impedance combined type silencer effectively reduce noise of the generator.
- ★ internal high performance rubber damper and flexible materials reduce vibration.
- ★ Base mounted fuel tank supports the generator running for 8 hours.

Construction features

- ★ Cold steel materials of the canopy.
- ★ Best powder paint.
- ★ Zinc plated and Corrosion resistance.
- ★ Elegant appearance and reliable quality.
- ★ Stainless steel locks and hinges.
- ★ Access to all weather conditions.
- ★ Fireproof, waterproof and dustproof.
- ★ High quality soundproof materials could efficiently reduce noise.
- ★ Big base fuel tank in the frame guarantee sufficient diesel supply.



Maintenance features

- ★ 180° revolvable and disassemble door for easy maintenance.
- ★ Concave lockable access door for easy operation and indefectible.
- ★ Lights inside of the canopy for maintenance.

Security and Safety

- ★ Transparent viewing window make the control panel clear at a glance.
- ★ Emergency stop button mounted on the canopy exterior for urgency.
- ★ Cooling fluid injection hole is kept on the ceiling crust.
- ★ Pipe of lube oil and cooling fluid is mounted on the bottom of generator for easy let.
- ★ Fuel fill and battery can easy be accessed by lockable door.
- ★ Cooling fan and battery are fully guarded.
- ★ Heat insulation of exhaust smoke system inside the canopy.

Transportation

- ★ Forkman slot is for choice.
- ★ Lifting ear is mounted in the base frame.

