

AOSIF FAW Series

AX117 Technical Data

AOSIF
POWER GENERATOR



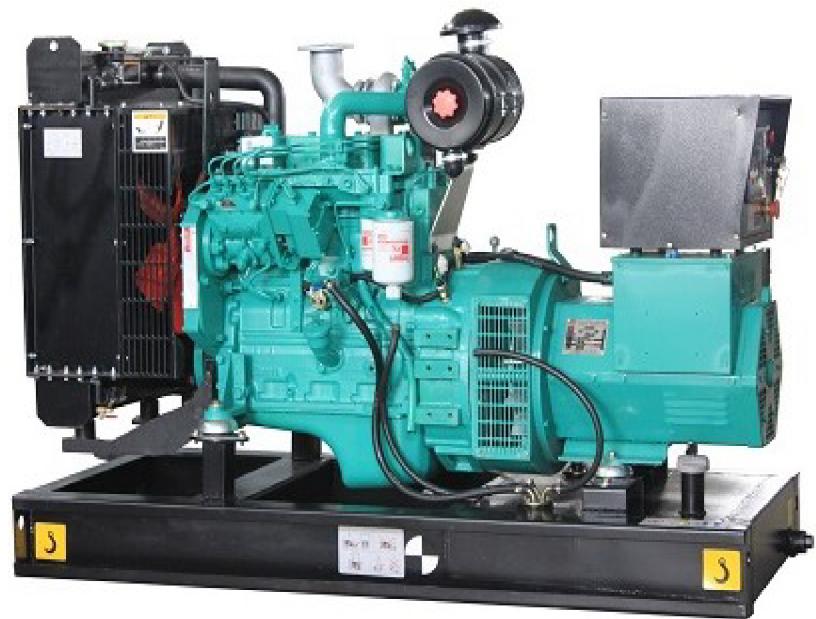
FAW Power Generator

106KVA/85KW



XIAMEN AOSIF ENGINEERING LTD.

**Powered by
FAW CA4DF2-14D
60Hz, 220V**



General feature:

- ◆ Assembled by FAW diesel engine and Aosif alternator.
- ◆ Three filters as standard, fuel and water separator as optional.
- ◆ Radiator and fan with safety guard.
- ◆ Single bearing alternator IP 23, Insulation Class H.
- ◆ Heavy duty steel as base frame and 8hrs operation base fuel tank.
- ◆ Automatic control panel and 3 poles circuit breaker, internal cable.
- ◆ 12V or 24V battery, battery wires.
- ◆ Battery charger and float battery charger as standard supply scope.
- ◆ Optional soundproof canopy, ATS, synchronization panel, movable trailers.

Genset Main Technical Data:

Genset Model	AX117
Prime Power	85KW / 106KVA
Standby Power	94KW / 117KVA
Frequency/Speed	60Hz/1800rpm
Standard Voltage	127V/220V
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.

FAW Engine Data:

Basic technical data

Engine Model	CA4F2-14D	
No. of cylinders	4	
Cylinder arrangement	In-line	
Cycle	4 stroke	
Aspiration	Turbocharged & Intercooled	
Cooling system	Water-cooled	
Bore	mm	110 mm
Stroke	mm	125 mm
Compression ratio	17:1	
Displacement	L	4.75 L
Dry engine weight	kg	480 kg
Dimension (L*W*H)	mm	937*712*926
The Flywheel shell interface	SAE3-11.5"	

Performance Data

Governed Engine Speed	r/min	1800
Continuous Power without Fans	kW	101
Standby Power	kW	110
Adaptive power station [kw]	kW	85
Steady state speed regulation rate	%	N/M 0-3 / Electronical
Emission Standards	CN Stage II	
Noise Level	dB	≤114
Average effective pressure	mPa	1.42

Lubrication system

Lubricating oil capacity	L	14
Lubricating oil consumption	L/h	≤0.08

Fuel system

Fuel consumption PRP	kg/h	21.01
Fuel consumption Rate	g/kW·h	
25% prime power	g/kW·h	258
50% prime power	g/kW·h	221
75% prime power	g/kW·h	209
100% prime power	g/kW·h	209
100% standby power	g/kW·h	210

Air intake system

Air consumption	m ³ /min	7.5
Maximum allowed intake pressure	kPa	6.3
Fuel calorific value		N/M
Exhaust gas discharge	m ³ /min	19.1
Exhaust temperature (exhaust gas after turbine)	°C	460
Exhaust heat	kw	75.2
Maximum allowed back pressure	kPa	6.7

Heat balance

Engine heat output	kw	8.1
Heat removal of coolant	kw	55.6
Heat dissipation of intercooler	kw	17.41

Electrical system

Auxiliary voltage (V)	24 V
Alternator (A)	45
Starter Motor (kw)	5.5
Start preheater (kw)	1.5
Number of teeth of flywheel ring gear	129

ALTERNATOR Specifications:

Manufacturer	XIAMEN AOSIF ENGINEERING LTD
Model	AA-75-4
Output power	90KW/113KVA
AVR model	SX460
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	≤ 1000 m
Overspeed	2250RPM
Number of Pole	4
Exciter type	Self Excite
Insulation class	H
Protection	IP23
Voltage regulation	±0.5%
Total harmonics (THD)	at no load <3%, on load<2%
Wave form : NEMA = TIF	< 50
Bearing	single
Coupling	Direct

ALTERNATOR GENERAL DATA:

- ◆ operate either 50Hz or 60Hz.
- ◆ standard enclosure IP23, but IP44, IP55 for option
- ◆ insulation class H.
- ◆ Shunt excitataion systems.
- ◆ AREP or PMG system for options.
- ◆ automatic voltage regulator
- ◆ single bearing alternator

- ◆ Stator grease insulation covered
- ◆ Rotator and excitation high polymer
- ◆ Resist the corruption oil and acid
- ◆ Rotator balance is in accordance with BS5625 standard 12.5
- ◆ High-quality lubrication sealed long-time bearing
- ◆ Rotator silicon steel close tight

OTHER ALTERNATOR DATA:

REACTANCES (%) - TIME CONSTANTS (ms): CLASS : H / 380 V

Kcc	Short-circuit ratio	0.45
Xd	Direct axis synchronous reactance unsaturated	268
Xq	Quadrature axis synchronous reactance unsaturated	134
T'do	Open circuit time constant	806
X'd	Direct axis transient reactance saturated	16.6
T'd	Short circuit transient time constant	50
X"d	Direct axis subtransient reactance saturated	8.3
T"d	Subtransient time constant	5
X"q	Quadrature axis subtransient reactance saturated	11.9
Xo	Zero sequence reactance unsaturated	0.7
X2	Negative sequence reactance saturated	10.11
Ta	Armature time constant	7.5

OTHER DATA - CLASS : H / 380 V

io	No load excitation current (A) (SHUNT/AREP)	0.79/0.51
ic	Full load excitation current (A) (SHUNT/AREP)	2.71/1.77
uc	Full load excitation voltage (V) (SHUNT/AREP)	19.1/29.9
ms	Recovery time($\Delta U = 20\% \text{ trans.}$)	<500
Kva(Shunt)	Motor start. ($\Delta U = 20\% \text{ sust.}$) or ($\Delta U = 50\% \text{ Transient}$)	67.7
Kva(AREP)	Motor start. ($\Delta U = 20\% \text{ sust.}$) or ($\Delta U = 50\% \text{ Transient}$)	79.2
%	Transient dip (rated step load) SHUNT / PF : 0,8 LAG	<18%
%	Transient dip (rated step load) AREP / PF : 0,8 LAG	<18%
W	No load losses	764
W	Heat rejection	3692

AOSIF Circuit breaker specification:

	Manufacturer	Delixi group Co., Ltd.
Brand	Delixi	
Model	CDM1-400L/3300-400	
Capacity	400amp	
Voltage	220V	

AOSIF Starting Battery specification:

	Battery Voltage	12V
	Battery Capacity	80aH
	Quantity	2 pcs
	Battery type	Free maintenance, sealed lead-acid type

Control system:



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.

Parameters:

This controller can provide Generator frequency, Under/over speed, Generator volts, Generator current, Engine oil pressure, Engine coolant temperature, Flexible fuel level, Hours run counter, Battery volts, Fail to start/stop, Emergency Stop. Failed to reach loading voltage/frequency, Charge fail, Loss of magnetic pick-up signal, Low DC voltage, CAN diagnostics and CAN fail/error, Mains volts 3 phase, Mains frequency, AMF indications

Protection:

- ◆ Low Oil Pressure
- ◆ High water Temperature
- ◆ High voltage and low voltage
- ◆ Overspeed

Deepsea 6120

Auto start and stop control panel



- ① Power switch
- ② Lamp switch
- ③ Power indicator
- ④ Operation buttons
- ⑤ LCD display

- ◆ Volt adjuster and frequency adjuster.
- ◆ Emergency stop
- ◆ Fail to start

Features:

- ◆ Protection: Automatic start/stop, load transfer and alarming of generator;
- ◆ CAN and magnetic pick-up versions.
- ◆ PC and front panel configurable
- ◆ 4 digital inputs and 3 analogue inputs.
- ◆ 6 outputs(4 configurable on magnetic pick-up, 6 configurable on Canbus version).
- ◆ 3 phase generator and mains voltage monitoring.
- ◆ remote start on or off load.
- ◆ advanced metering capability.
- ◆ test button.
- ◆ protected solid state outputs.
- ◆ transfer between mains and generator power.
- ◆ user-friendly set-up and button layout.

multiple engine parameters are monitored simultaneously.

- ◆ module can be configured to suit individual applications.
- ◆ IP 65 rating offers advanced resistance to water ingress when gasket is fitted.



Open type



Silent type

AOSIF Soundproof Enclosure Specification:

AOSIF silent generator is designed by professional acoustic engineers based on 12 years experience.



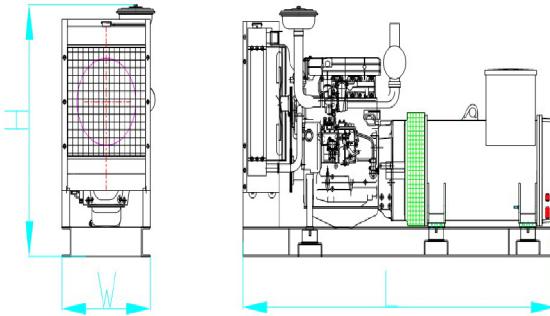
- ★ multi-way air intake and exhaust guarantee the power performance of the generator.
- ★ large-scale impedance combined type silencer effectively reduce noise of the generator.
- ★ internal high performance rubber damper and flexible materials reduce vibration.
- ★ Base mounted fuel tank supports the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

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

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

Weight and Dimensions

1. Open Version:

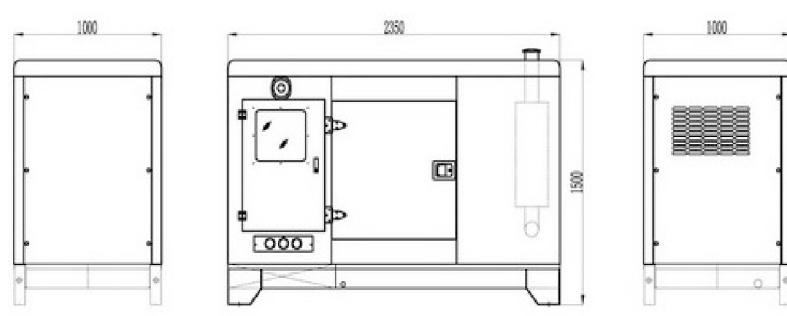


Open Type (Standard Configuration)

Overall Size: 2300×785×1450mm(L*W*H)

Weight: 1200kg

2. Soundproof Version:



Soundproof Type

Overall size: 2900×1100×1800mm(L*W*H)

Weight: 1800kg