



## DIESEL GENERATOR DATA SHEET

Power By Cummins

Model: AC688



### Output Ratings

Generator set model	Voltage (V)	Hz	Phase	P.F.	Prime Power		Standby Power	
					KVA	KW	KVA	KW
AC688	230/400	50	3	0.8	N/A	N/A	688	550

•220/380V, 240/415V, 254/440V is available

### Dimension & weight

Generator set model	Type	L*W*H(mm)	Weight(kg)
AC688	Open	3570*1550*2200	4450
	Silent	4200*1900*2420	5450

### Other datas

Circuit Breaker capacity (A)	1000
Battery Brand	Varta
Base Fuel Tank Capacity (L)	1257

### Notes:

- Standby power: Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046 .
- Prime power: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528, ISO 3046.
- Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.

### Warranty

- The standard warranty period: One year after ex-work or 1000 operation hours whichever come first shall apply.
- Consumable parts(air filter, fuel filter, lube oil filter) , All failures and damages due to the mal-operation, neglect of maintenance and operation not according to the operation manual, are out of the scope of warranty.

### Standard Features

- Engine include one set filters
- Brushless Alternator with AVR
- Radiator with engine driven fan
- Auto control system with LCD show
- 3P circuit breaker
- Battery charger and Start battery
- Industrial silencer
- Anti-vibration pads
- 8hrs bottom fuel tank ≤650KVA
- Standard tools kits
- User manual & Wiring diagrams
- Standard tools kits

### Options

- Silent canopy (powder coated)
- ATS
- Remote Control panel
- Synchronization system
- Mobile trailer
- Engine heater (water/oil)
- Fuel and water separator
- Alternator space heater
- PMG
- ABB or 4P circuit breaker
- External fuel tank
- Double wall base fuel tank
- Residential exhaust silencer



Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

## Engine

### GENERAL ENGINE DATA

Engine manufacturer		Chongqing Cummins Engine Co., Ltd.
Engine brand		Cummins
Engine model		KTAA19-G6A
Engine speed (rpm)		1500
Engine output(kW)		
	Standby power rating	610
	Prime power rating	N/A
Type		4-Cycle, In line, 6 Cylinder
Aspiration		Turbocharged and air to air cooled
Bore * Stroke (mm)		159 * 159
Displacement (litre)		19
Compression Ratio		13.9:1

### FUEL SYSTEM

Type Injection System		Direct Injection Cummins PT
Fuel Consumption (litre/hour)		
	110% output power	157
	75% output power	N/A
	50% output power	N/A
	25% output power	N/A

### EXHAUST SYSTEM

Maximum Back Pressure (kPa)		7.8
Exhaust Gas Temperature (overload/prime power) (°C)		446 / N/A
Exhaust Gas Flow(overload/prime power) (liter/s)		2478 / N/A

### AIR INDUCTION SYSTEM

Maximum Intake Air Restriction (in. H2O)		
	with Dirty Filter Element	25
	with Clean Filter Element	15
Intake Air Flow (overload/prime power) (liter/s)		850 / N/A

### COOLING SYSTEM

Coolant Capacity — Engine Only (liter)		23
Standard Thermostat Modulating Range		82-93
Maximum Coolant Temperature (°C)		96.1
Minimum Coolant Makeup Capacity(L)		6.1
Maxi. Top Tank Temp.(standby power/prime power) (°C)		104/100

### LUBRICATION SYSTEM

Oil Pressure (kPa)		
	Idle Speed	138
	Governed Speed	345-483
Maximum Oil Temperature (°C)		121
Total System Capacity (Excluding By-Pass Filter) (liter)		50

### ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement) (volt)		24
Battery Charging System, Negative Ground (ampere)		35

## ALTERNATOR

Alternator manufacturer	Cummins Generator Technologies(China) Co. Ltd
Alternator brand	Stamford
Alternator model	S5L1S-F4
Control system	SELF EXCITED
A.V.R.	Included
Voltage regulation	±1.0%
Insulation system	Class H
Protection	IP23
Rated power factor	0.8
Winding pitch	Two thirds
Winding leads	12
Frequency (Hz)	50
Voltage (V)	400
Phase	3
Output ratings (kVA/kW)	
-----Cont.H-40°C	670/536
-----Standby-27°C	738/590
THF	<2%
TIF	<50
Max. overspeed (Rev/Min)	2250
Bearing	Single

## CONTROL SYSTEM

Ai Power adopts ComAp AMF9 or Deepsea DSE6120 as the standard controller for single gen-set applications..  
AMF25 or DSE7320 for option.



**ComAP AMF9**



**Deepsea DSE6120**

### Features

- Single-genset controller for stand-by and prime power applications
- 3 phase AMF function
- 3 phase generator protections
  - over/under frequency, over/under voltage, over current
- True RMS voltage measurement
- True RMS current measurement
- Event and performance log
  - Gen-set ext alarm, Engine hours history, ECU Text alarm, Test Run scheduler
- Power Measurements
- User interface
- Inputs and outputs
  - Configurable analogue/digital, binary
- Direct communication with EFI engines
- Engine Protections
  - Oil pressure, Coolant temperature, Fuel level
- Breaker control via fasica buttons
- Fuel Pump control
- Optional Active Calls(SMS alarm/event)
- Miscellaneous features
- Communication interface
  - USB plug-in, Optional RS232, RS485, GSM
- Multiple display languages
- Start on low battery
- Real-time clock
- Zero power mode
- LCD and LED alarm indication
- Configuration Suite PC Software.
- IP65 protection class
- Remote monitoring

### Protection function:

- Low oil Pressure
- High water temperature
- High voltage and low voltage
- Over current
- Over speed
- Emergency stop
- Low fuel alarm and shutdown
- Fail to start

## Open and Silent Generator

Ai Power silent generator is widely used in residential area which require quiet environment, its reasonable and elegant design not only reduce the noise to applicable to the environment protection, but also a good view on the road. Our 10kva to 650kva generator adopts normal silent canopy, from 650kva to 1500kva adopts 20ft container canopy, the higher power adopts 40HQ contain



### Open Generator Standard Supply

#### The Open Type Generator Includes:

1. Automatic control panel.
2. 3 phases or single phase brushless alternator.
3. anti-vibration pad.
4. different brand engine.
5. water cooled radiator.
6. battery protection switch.
7. sealed lead acid free maintenance battery.
8. trickle battery charger.
9. 3P Chinese brand Circuit breaker.
10. Exhaust silencer, elbow and flange.



### Silent Generator Standard Supply

#### Silent Generator Standard Supply:

1. AMF automatic control system
2. Fresh air inlet cooling system
3. Emergency stop
4. 3P Chinese brand Circuit Breaker
5. Cable output placement
6. 8hrs strong base fuel tank
7. stainless steel hinges
8. maintenance door



### Silent Canopy Features

#### Silent Canopy Features:

1. more than 2mm thick steel canopy.
2. High quality paint and strict powder paint processing.
3. large-scale impedance combined type silencer.
4. Stainless steel door locks and hinges.
5. High quality fireproof, soundproof and insulation materials.
6. Clear monitoring control panel and outer emergency stop.
7. Lifting ear is mounted in the base frame for easy pull.
8. Fuel and lub oil drainout is all connected to the canopy.
9. Fuel refill opening is on the outer canopy.

