

CUMMINS SERIES



# MODEL AC125 KAN GENSET 125KVA/60KW



## General Performance Data

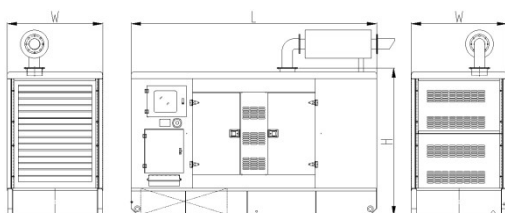
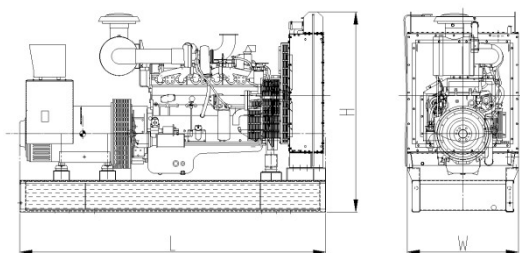
|                          |              |                     |                                |           |
|--------------------------|--------------|---------------------|--------------------------------|-----------|
| Prime Power              | 113KVA/90KW  | Engine              | Brand                          | Cummins   |
| Stand by Power           | 125KVA/100KW |                     | Model                          | 6BT5.9-G2 |
| Frequency/Speed          | 60Hz/1800rpm | Control module      | Deepeat 6120                   |           |
| Rated Power Factor(cosφ) | 0.8          | Rated Current       | 295A                           |           |
| Standard Voltage         | 127V/220V    | Capacity of Breaker | 400A                           |           |
| Phases                   | 3            | Starting Voltage    | DC24V                          |           |
|                          |              |                     | Standard exhaust pipe diameter |           |

## Fuel consumption

| Rated output | Fuel consumption rate |           |
|--------------|-----------------------|-----------|
|              | 100%Standby           | 235g/KW.h |
| 100%Prime    | 235g/KW.h             | 28.5L/h   |
| 75%Prime     | 228g/KW.h             | 20.7L/h   |
| 50%Prime     | 238g/KW.h             | 14.4L/h   |
| 25%Prime     | 297g/KW.h             | 9.0L/h    |

## Standards followed

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



## Dimensions and Weights

| Type                      | Open | Silent |
|---------------------------|------|--------|
| Length(mm)                | 2070 | 2900   |
| Width(mm)                 | 800  | 1100   |
| Height(mm)                | 1450 | 1603   |
| Weight(kg)                | 1150 | 1700   |
| Base fuel tank volume (L) | 170  | 170    |

## Engine specification

### Basic parameter

|                               |                           |
|-------------------------------|---------------------------|
| Manufacturer                  | dongfeng Cummins          |
| Model                         | 6BT5.9-G2                 |
| No. of cylinder               | 6                         |
| Type                          | 4 cycle, Vertical In-line |
| Prime Power                   | 100kw /133HP              |
| Standby Power                 | 110kw /147HP              |
| Induction system              | Turbocharged              |
| 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 | 31.3 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   |

### Exhaust system

|                              |       |
|------------------------------|-------|
| Max. allowable back pressure | 10kPa |
|------------------------------|-------|

### Cooling system

|  |            |
|--|------------|
| Coolant capacity   |            |
| ---Engine only   | 7.9L       |
| ---Total system  | 22.4 L     |
| ---With heat exchanger                                       | 14.5L      |
| Standard thermostat(modulating) range                        | 82-95 °C   |
| Minimum cap pressure   | 69kPa      |
| Max. allowable top tank temperature 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 |

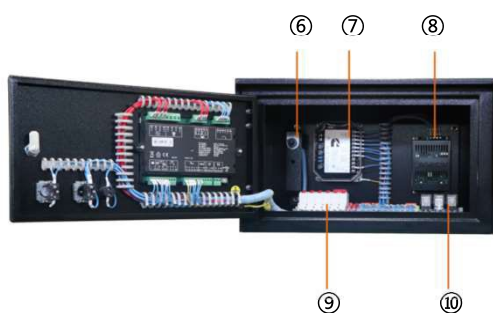
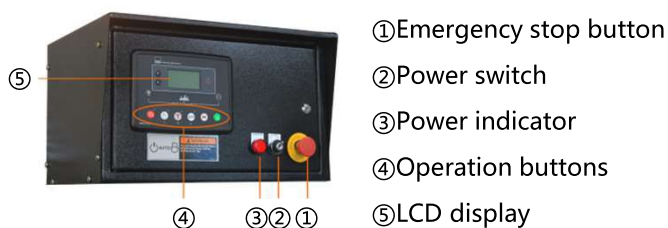
## Alternator specification

|                        |      |                   |                     |
|------------------------|------|-------------------|---------------------|
| 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



- ⑥ Voltage and frequency trimmer
- ⑦ Governor
- ⑧ Charger
- ⑨ MCB
- ⑩ Relay

### 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 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

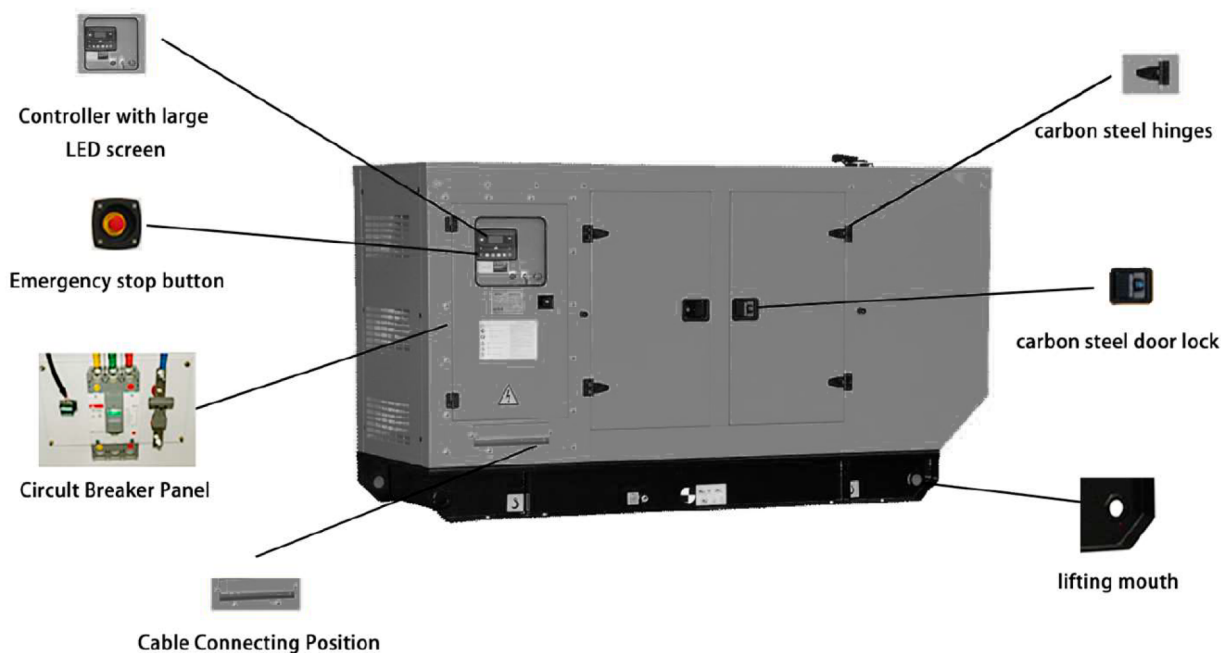
### Main features:

- 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

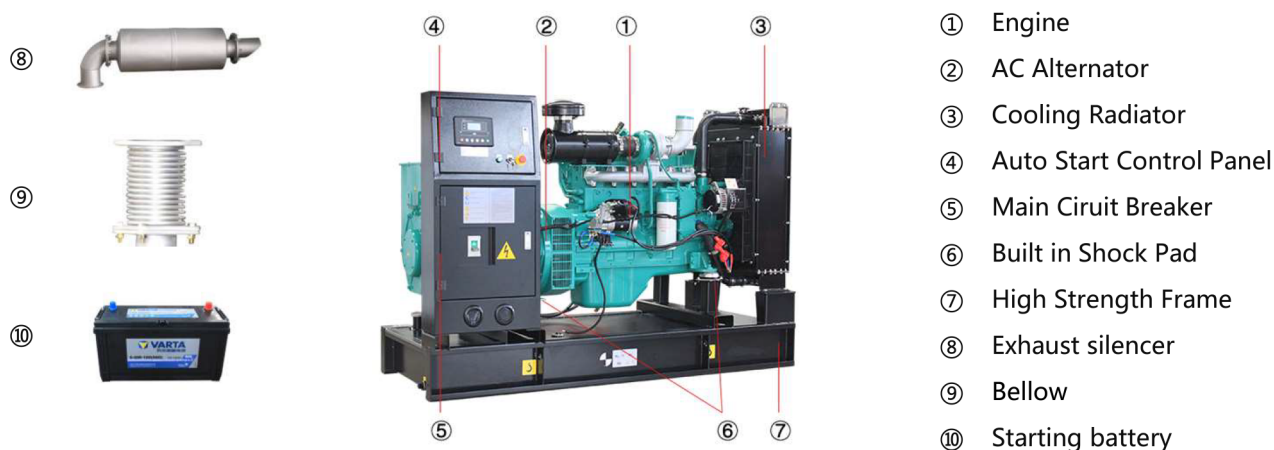
### Protection:

- 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 Typical Canopy



## Standard supply scope:



## 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>   |