

## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009

### Environmental Operating Conditions

- Installation place: Indoors (well ventilated).
- Ambient temperature: -25°C to 50°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters above sea level.

### Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

### Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

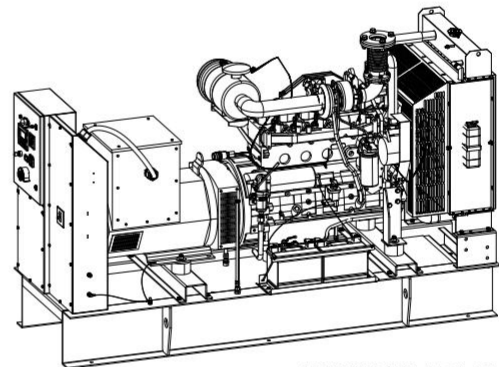
## 2 General Features

- Cummins engine 6BT5.9-G1
- Close coupled to a Stamford alternator UCI224G
- Microprocessor control module PLC-702
- MCCB main circuit breaker: 125A
- Rotate speed governor: Mechanical governor
- Excitation system: Self excited
- A.V.R model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle

- 2x12V/70AH sealed for life maintenance free battery
- Lockable battery isolator switch
- 50°C radiator
- Oil pump on the engine
- Steel base frame with lifting lugs
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 11 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

## 3 Equipment Specification

### General technical data

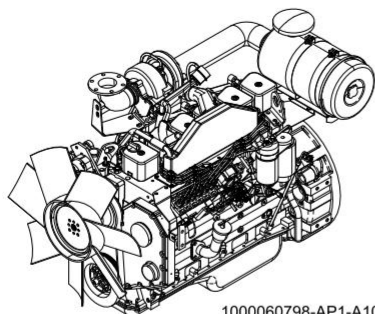


1000020123-AP1-C3

Model.....HCL80C  
 Structure type..... A  
 Tank capacity.....236L  
 Dry weight..... 1198kg  
 Noise level @7m ..... 90.8dBA  
 Dimensions L×W×H.....2485×883×1495mm  
 Standby Power ..... 88kVA/70kW  
 Prime Power..... 80kVA/64kW

|                         |        |        |        |        |      |
|-------------------------|--------|--------|--------|--------|------|
| Voltage                 | 380V   | 400V   | 415V   | 440V   |      |
| Ampere                  | 121.6A | 115.5A | 111.3A | 104.9A |      |
| Genset Fuel Consumption |        |        |        |        |      |
| Frequency/Load          | 25%    | 50%    | 75%    | 100%   | 110% |
| 50Hz (L/h)              | 7.0    | 11.0   | 17.0   | 22.0   | 25.0 |

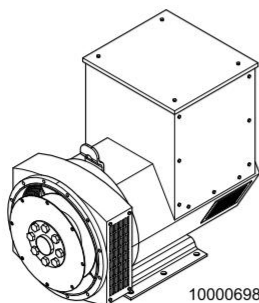
## Diesel Engine



1000060798-AP1-A10

|                                      |                    |
|--------------------------------------|--------------------|
| Engine Manufacturer/Brand.....       | Cummins            |
| Engine Model.....                    | 6BT5.9G1           |
| Dimensions L×W×H.....                | N/A                |
| Dry Weigh (approx.) .....            | 411kg              |
| Number of Cylinders.....             | 6                  |
| Bore.....                            | 102mm              |
| Stroke .....                         | 120mm              |
| Displacement.....                    | 5.9L               |
| Compression Ratio .....              | 16.8               |
| Type of injection.....               | Direct injection   |
| Intake System.....                   | Turbo charged      |
| Intake Resistance.....               | ≤6.28kPa           |
| Cooling System .....                 | Water cooled       |
| Fan .....                            | Pusher             |
| Battery Voltage .....                | 12/24V             |
| Type of Fuel.....                    | Diesel             |
| Type of Oil .....                    | 15W40-CF4          |
| Oil Capacity .....                   | 14.2L              |
| Type of Coolant .....                | Glycol mixture     |
| Coolant Capacity .....               | 29.7L              |
| Heat Rejected To Exhaust System..... | N/A                |
| Heat Rejected To Water&Oil.....      | 49kW( 2744BTU/min) |
| Back Pressure .....                  | ≤10.1kPa           |
| Standby Power .....                  | 92kW               |
| Prime Power .....                    | 86kW               |
| Fuel Consumption(100%load).....      | 214g/kW.h          |

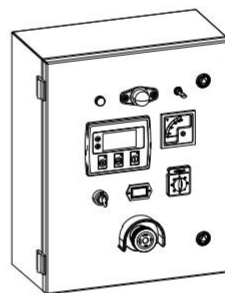
## Alternator



1000069871-AP1-A1

|                                                           |                                 |
|-----------------------------------------------------------|---------------------------------|
| Alternator Manufacturer/Brand .....                       | Stamford                        |
| Alternator Model .....                                    | UCI224G                         |
| Exciter.....                                              | Brushless                       |
| Cooling Fan .....                                         | Cast alloy aluminum             |
| Windings.....                                             | 100% copper                     |
| Insulation Class .....                                    | H                               |
| Winding Pitch.....                                        | 2/3                             |
| Terminals .....                                           | 12                              |
| Drip Proof .....                                          | IP23                            |
| Altitude.....                                             | ≤1000m                          |
| Overspeed .....                                           | 2250 rpm                        |
| Air Flow.....                                             | 0.216m³/s(50HZ),0.281m³/s(60HZ) |
| Voltage Regulation .....                                  | ±1.0%                           |
| Total harmonic TGH / THCat no load < 1.5 % - on load < 5% |                                 |
| Telephone Interference.....                               | THF<2%;TIF<50                   |

## DSE Control System



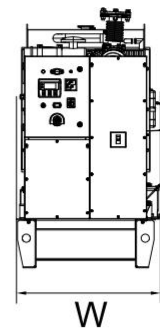
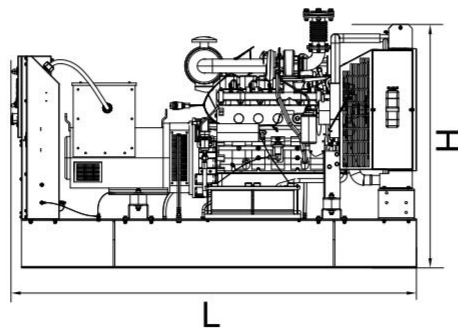
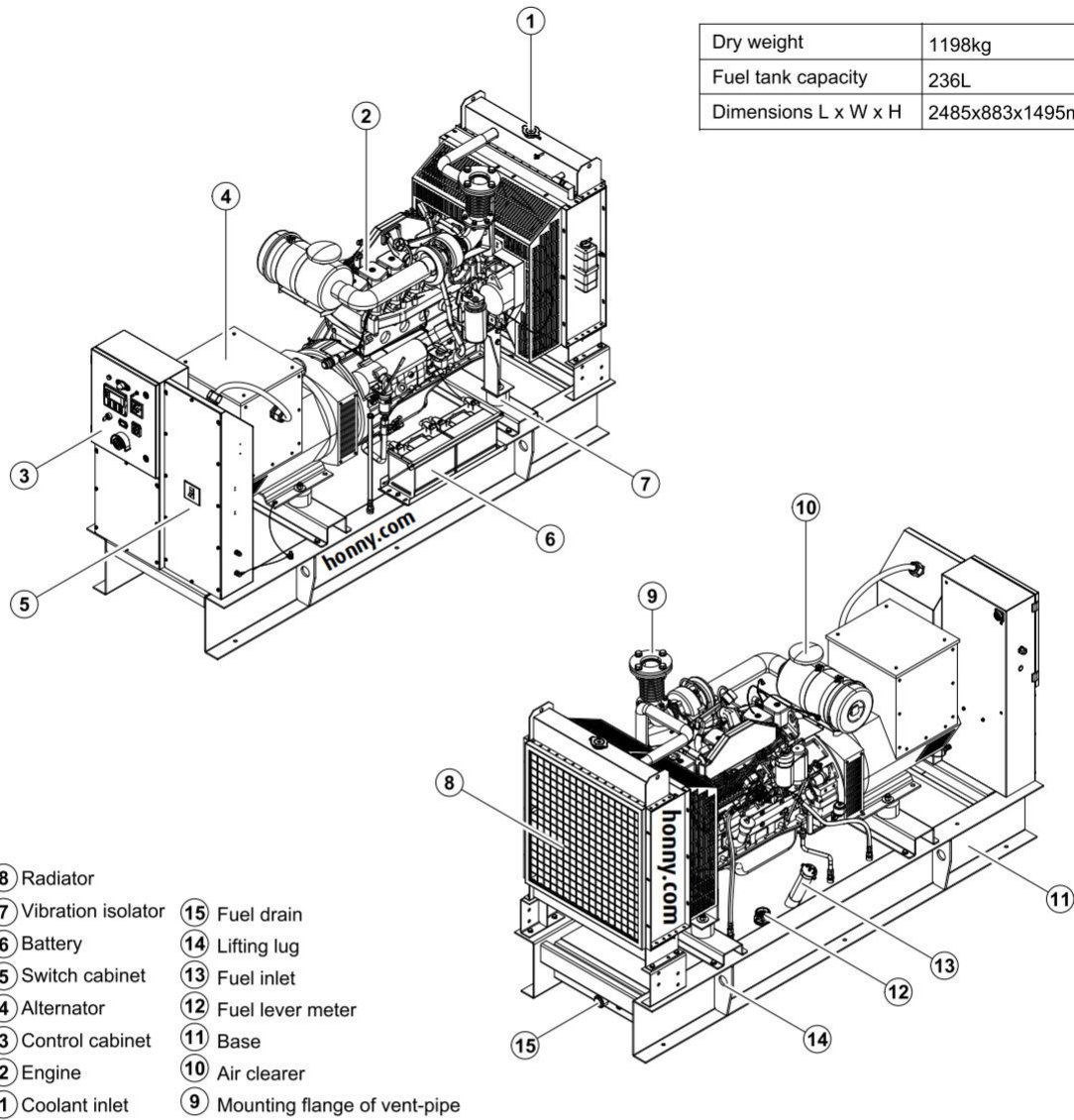
1000262115-AP1-A1

DSE-920 is an advanced control module based on microprocessor designed to control the engine via push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

### Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning

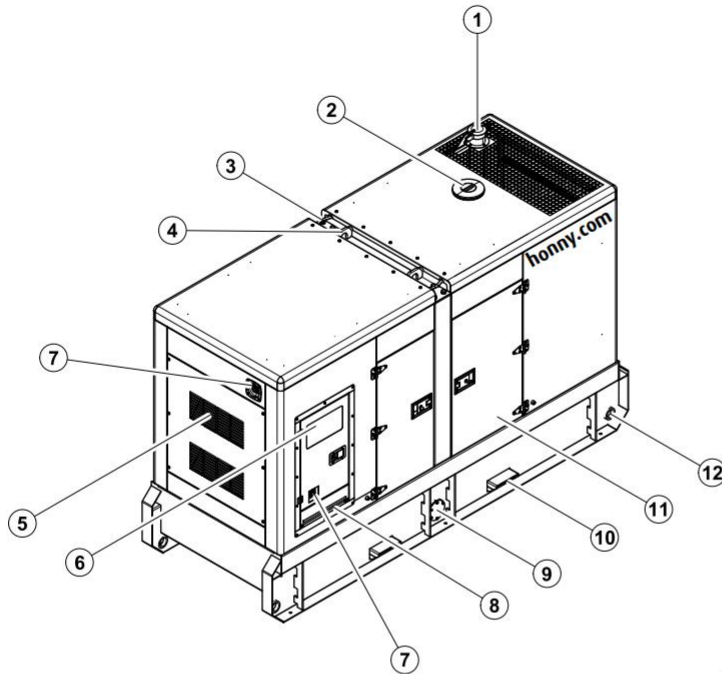
1000020123-DR1-C3





1000023415-DR1-B5

|                      |                  |
|----------------------|------------------|
| Dry weight           | 2100kg           |
| Fuel tank capacity   | 540L             |
| Dimensions L x W x H | 3162x1174x1974mm |



- ⑧ Cable trench
- ⑦ Emergency stop switch
- ⑥ Control cabinet
- ⑤ Air inlet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ Coolant/Oil drain hose fitting
- ⑭ Base frame
- ⑬ External fuel inlet/return hose fitting
- ⑫ Tie down
- ⑪ Access door
- ⑩ Fork lift channel
- ⑨ Fuel drain

